



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION

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www.miamidade.gov/economy

Firestone Building Products Company, LLC
250 East 96th Street
Indianapolis, IN 46240-3702

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Firestone Modified Bitumen Roof Systems over Concrete Decks.

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises NOA No.11-0119.11 and consists of pages 1 through 121.

The submitted documentation was reviewed by Jorge L. Acebo.



NOA No.: 13-0522.04
Expiration Date: 03/08/16
Approval Date: 08/21/14
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ROOFING SYSTEM APPROVAL

Category: Roofing
Sub-Category: Modified Bitumen
Material: APP/SBS
Deck Type: Concrete
Maximum Design Pressure: -547.5 psf

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1			
Product	Dimensions	Test Specification	Product Description
APP 80 Glass Base	39.4" x 65'4"	ASTM D6509	Fiberglass reinforced APP modified bitumen, smooth surfaced base sheet with burn-off film.
APP Premium Base	39.4" x 65'4"	ASTM D6509	Fiberglass reinforced APP modified bitumen, smooth surfaced base sheet.
SBS Glass Torch Base	39.4" x 65'3"	ASTM D6163	Fiberglass reinforced SBS Modified bitumen ply sheet with sanded bitumen top surface and burn-off film
SBS Glass Torch Base 1.5	39.4" x 65'3"	ASTM D6163	Fiberglass reinforced, SBS Modified bitumen ply sheet with sanded bitumen top surface and burn off film
SBS Base	39.4" x 50'	ASTM D6163	Fiberglass reinforced SBS modified bitumen ply with surface base sheet. Applied in hot asphalt or mechanically attached.
SBS Premium Base	39.4" x 50'	ASTM D6164	Fiberglass reinforced SBS modified bitumen with sanded surfaces.
SBS Poly Base	39.4" x 50'	ASTM D6164	Polyester reinforced SBS modified bitumen membrane with sanded surfaces.
SBS Premium Poly Base	39.4" x 50"	ASTM D6164	Polyester reinforced, SBS modified bitumen membrane with sanded surfaces.
SBS Poly Torch Base	39.4" x 33'6"	ASTM D6164	Polyester reinforced SBS modified bitumen ply with sanded top surface with burn-off film.
Ply IV	39.4" x 164.5'	ASTM D2178	Asphalt impregnated, glass fiber mat reinforced, roofing ply
Ply VI	39.4" x 164.5'	ASTM D2178	Asphalt impregnated, glass fiber mat reinforced, roofing ply
Ply IV (4) M	39.4" x 164.5'	ASTM D2178	Asphalt impregnated, glass fiber mat reinforced, roofing ply
Ply VI (6) M	39.4" x 164.5'	ASTM D2178	Asphalt impregnated, glass fiber mat reinforced, roofing ply
MB Base	36" x 108'	ASTM D4601	Fiberglass reinforced base sheet, asphalt coated on both sides. Applied in hot asphalt or mechanically attached.
MB Base M	39.4" x 98.7'	ASTM D4601	Fiberglass reinforced base sheet, asphalt coated on both sides. Applied in hot asphalt or mechanically attached.



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TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1			
Product	Dimensions	Test Specification	Product Description
SBS Smooth	39.4" x 33'6"	ASTM D6164	Polyester reinforced SBS modified bitumen membrane with sanded surfaces.
APP 160	39." x 32'10"	ASTM D6222	Polyester reinforced APP modified bitumen, smooth surfaced membrane with burn-off film.
APP 160 Cool	39." x 32'10"	ASTM D6222	Polyester reinforced APP modified bitumen, smooth surfaced membrane.
APP 160-P	39." x 32'10"	ASTM D6222	Polyester reinforced APP modified bitumen, smooth surfaced membrane with burn-off film.
APP 170	39." x 32'10"	ASTM D6222	Polyester reinforced APP modified bitumen, smooth surfaced membrane.
APP 170 Cool	39.4" x 33'10"	ASTM D6222	Polyester reinforced APP modified bitumen, smooth surfaced membrane.
APP 180	39.4" x 32'10"	ASTM D6222	Polyester reinforced APP modified bitumen, granule surfaced membrane with burn-off film.
APP 180-P	39.4" x 32'10"	ASTM D6222	Polyester reinforced APP modified bitumen, granule surfaced membrane with burn-off film.
APP 180 UltraWhite	39.4" x 32'10"	ASTM D6222	Polyester reinforced APP modified bitumen, UltraWhite, granule surfaced membrane with burn-off film.
APP 180 FR	39.4" x 32'10"	ASTM D6222	Polyester reinforced fire resistant APP modified bitumen granule surfaced membrane with burn-off film.
APP 180 FR UltraWhite	39.4" x 32'10"	ASTM D6222	Polyester reinforced fire resistant APP modified bitumen, UltraWhite, granule surfaced membrane with burn-off film.
APP 180 Cool	39.4" x 32'10"	ASTM D6222	Polyester reinforced APP modified bitumen, granule surfaced membrane.
APP 180 FR Cool	39.4" x 32'10"	ASTM D6222	Polyester reinforced, fire retardant APP modified bitumen, granule surfaced membrane with burn-off film.
APP Premium FR	39.4" x 32'10"	ASTM D6223	Combination fiberglass scrim and polyester mat reinforced, fire retardant APP modified bitumen, granule surfaced membrane.
SBS Glass	39.4" x 33'6"	ASTM D6163	Fiberglass reinforced, SBS modified bitumen, granule surfaced membrane with sanded bottom surface.
SBS Glass FR	39.4" x 33'6"	ASTM D6163	Fiberglass reinforced, fire resistant, SBS modified bitumen membrane, granule surfaced with sanded bottom surface.

Product	Dimensions	Test Specification	Product Description
SBS Glass FR UltraWhite	39.4" x 33'6"	ASTM D6163	Fiberglass reinforced, fire resistant, SBS modified bitumen membrane, UltraWhite granule surfaced with sanded bottom surface.
SBS Glass FR Torch	39.4" x 33'6"	ASTM D6163	Fiberglass reinforced, fire resistant, SBS modified bitumen ply with sanded top surface and burn-off film.
SBS Glass FR Torch UltraWhite	39.4" x 33'6"	ASTM D6163	Polyester reinforced, fire resistant, SBS modified bitumen membrane, UltraWhite granule surfaced with burn-off film.
SBS Torch	39.4" x 33'6"	ASTM D6164	Polyester reinforced, SBS modified bitumen membrane, granule surfaced with burn-off film.
SBS Torch UltraWhite	39.4" x 33'6"	ASTM D6164	Polyester reinforced, SBS modified bitumen membrane, UltraWhite granule surfaced with burn-off film.
SBS FR Torch	39.4" x 33'6"	ASTM D6164	Polyester reinforced, fire resistant, SBS modified bitumen, granule surfaced with burn-off film.
SBS FR Torch UltraWhite	39.4" x 33'6"	ASTM D6164	Polyester reinforced, fire resistant, SBS modified bitumen membrane, UltraWhite granule surfaced with burn-off film.
SBS Cap	39.4" x 33'6"	ASTM D6164	Polyester reinforced, SBS modified bitumen membrane, granule surfaced with sanded bottom surface.
SBS Cap UltraWhite	39.4" x 33'6"	ASTM D6164	Polyester reinforced, fire resistant, SBS modified bitumen membrane, UltraWhite granule surfaced with sanded bottom surface.
SBS FR Cap	39.4" x 33'6"	ASTM D6164	Polyester reinforced, fire resistant, SBS modified bitumen membrane, UltraWhite granule surfaced with sanded bottom surface.
SBS FR Cap UltraWhite	39.4" x 33'6"	ASTM D6164	Polyester reinforced, fire resistant, SBS modified bitumen membrane, UltraWhite granule surfaced with sanded bottom surface.
SBS Premium	39.4" x 33'6"	ASTM D6164	Polyester reinforced, SBS modified bitumen membrane, granule surfaced with sanded bottom surface.
SBS Premium FR	39.4" x 33'6"	ASTM D6164	Polyester reinforced, fire resistant, SBS modified bitumen membrane, granule surfaced with sanded bottom surface.
SBS Premium FR UltraWhite	39.4" x 33'6"	ASTM D6164	Polyester reinforced, fire resistant, SBS modified bitumen membrane, UltraWhite granule surfaced with sanded bottom surface.
SBS Premium Torch	39.4" x 33'5"	ASTM D6164	Polyester reinforced, fire retardant, SBS modified bitumen membrane with burn-off film.

Product	Dimensions	Test Specification	Product Description
SBS Premium Torch UltraWhite	39.4" x 33'6"	ASTM D6164	Polyester reinforced, SBS modified bitumen membrane, UltraWhite granule surfaced, with burn-off film.
SBS Premium FR Torch	39.4" x 33'6"	ASTM D6164	Polyester reinforced, fire resistant, SBS modified bitumen membrane, granule surfaced with burn-off film.
SBS Premium FR Torch UltraWhite	39.4" x 33'6"	ASTM D6164	Polyester reinforced, fire resistant, SBS modified bitumen membrane, UltraWhite granule surfaced with burn-off film.
I.S.O. Twin Pack Insulation Adhesive	1500 ml	Proprietary	A dual component polyurethane adhesive.
I.S.O. FIX II	30 lbs.	Proprietary	A single component polyurethane insulation adhesive.
I.S.O. Stick	5 gal. & 1500 ml	Proprietary	A dual component polyurethane adhesive.
Firestone Multi-Purpose MB Cold Adhesive	5 gal.	Proprietary	An asphalt matrix blended with fibers based adhesive
LiquiGard Membrane Adhesive	6 gal.	Proprietary	A two-part urethane adhesive.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
ISO 95+ GL (and Tapered),	Polyisocyanurate Insulation board with glass reinforced organic facer	Firestone Building Products Company, LLC
RESISTA (and Tapered)	Polyisocyanurate Insulation board with coated fiberglass facer	Firestone Building Products Company, LLC
FiberTop E	Regular wood fiber insulation	Firestone Building Products Company, LLC
ISOGARD HD	High density Polyisocyanurate roof board with a coated fiberglass facer	Firestone Building Products Company, LLC
ISOGARD HD Composite	Polyisocyanurate foam core laminated to ISOGARD HD board	Firestone Building Products Company, LLC
DensDeck, DensDeck Prime	Silicon treated gypsum	Georgia Pacific Gypsum LLC
SECUROCK Gypsum-Fiber Roof Board	Gypsum Cover board	United States Gypsum Corporation
High Density Wood Fiberboard	High Density Wood Fiber insulation board.	Generic
Perlite Insulation Board	Perlite Insulation	Generic



APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Firestone All-Purpose	Insulation and membrane fastener	Various	Firestone Building Products Company, LLC
2.	Firestone Heavy-Duty	Insulation and membrane fastener	Various	Firestone Building Products Company, LLC
3.	Firestone Concrete Drive	1/4" diameter concrete deck fastener.	Various	Firestone Building Products Company, LLC
4.	MB 2" Barbed Metal Seam Plate	Metal plates used for membrane securement.	2" dia	Firestone Building Products Company, LLC
5.	Firestone 2-3/8 Barbed Seam Plate	Membrane seam attachment plate.	2-3/8" dia	Firestone Building Products Company, LLC
6.	2" Metal Plate	Membrane attachment plate.	2" dia	Firestone Building Products Company, LLC
7.	Insulation Fastening Plate	Insulation plate for use with Firestone Fasteners	3" round	Firestone Building Products Company, LLC
8.	#14 Roofgrip	Insulation and membrane fastener	Various	OMG, Inc.

EVIDENCE SUBMITTED:

<u>Test Agency</u>	<u>Test Identifier</u>	<u>Description</u>	<u>Date</u>
FM Approvals	1D5A8.AM	FM 4470	09/09/98
	3003597	FM 4470	07/14/99
	3004786	FM 4470	05/16/00
	3005030	FM 4470	08/08/00
	3014031	FM 4470	07/22/02
	3022502	FM 4470	01/29/07
	3030227	FM 4470	06/18/07
	3007328	FM 4470	07/12/02
	3012321	FM 4470	07/29/02
	3014692	FM 4470	08/05/03
	3033218	FM 4470	08/04/10
	3035017	FM 4470	08/04/10
	3031943	FM 4470	09/25/09
	3033921	FM 4470	08/04/10
	3030107	FM 4470	12/24/09
	3009613	FM 4470	03/03/11
	3028093	FM 4470	03/03/11
	3040795	FM 4470	03/24/11
	3041534	FM 4470	03/09/11
	3042392	FM 4470	06/08/11
	3035560	FM 4470	01/11/10
	3038191	FM 4470	08/04/11
	3040306	FM 4470	09/07/11
	3046333	FM 4470	08/10/12
	3047398	FM 4470	08/15/13
	3037346	FM 4470	03/09/11
	3040109	FM 4470	03/09/11
	3030227	FM 4470	06/18/07
	3044047	FM 4470	08/15/13
Underwriters Laboratories Trinity ERD	R9516	UL 790	01/25/13
	48101.96-1	TAS 114-C & TAS 114-D	01/31/96
	F880018-R1	TAS 114	04/21/08
	F1037058	ASTM C1289	05/08/08
	F10500.108-1	ASTM D6163	08/26/08
	F319605.10-1	ASTM D4977	05/19/10
	F319605.10-2	ASTM D4977	05/19/10
	F319608.10-1	ASTM D4977	08/25/10
	F319608.10-2	ASTM D4977	08/25/10
	F354005.11	ASTM Physical Properties	05/31/11
	F410708.12	ASTM D6222	08/24/12
	U41790.05.12-2-R2	ASTM D6222	02/11/13
	U41790.05.12-1-R1	ASTM D6222	01/21/13
IRT-ARCON, Inc. Atlantic & Caribbean Roof Consulting, LLC.	02-010, 02-011	TAS 114	01/28/02
	03-002	TAS 114	03/06/03

<u>Test Agency</u>	<u>Test Identifier</u>	<u>Description</u>	<u>Date</u>
PRI Construction Materials Technologies LLC	FBP-018-02-01	ASTM D6163	09/07/04
	FBP-011-02-01	ASTM D6164	09/02/04
	FBP-008-02-01	ASTM D6222	09/10/04
	FBP-009-02-01	ASTM D6222	08/31/04
	FBP-010-02-01	ASTM D6164	09/04/04
	FBP-014-02-01	ASTM D6164	09/02/04
	FBP-015-02-01	ASTM D6509	09/02/04
	FBP-016-02-01	ASTM D6509	09/02/04
	FBP-017-02-01	ASTM D6163	09/13/04
	FBP-019-02-01	ASTM D4601	09/14/04
	FBP-023-02-01	ASTM D6223	09/01/04
	FBP-007-02-01	ASTM D6222	09/14/04
	FBP-020-02-01	ASTM D2178	09/14/04
	FBP-038-02-03	ASTM D6164	01/12/11
	FBP-038-02-04	ASTM D6164	01/12/11
	FBP-038-02-02	ASTM D6164	01/12/11
	FBP-038-02-01	ASTM D6164	12/27/10
	FBP-043-02-03	ASTM D6164	07/26/11
	FBP-043-02-02	ASTM D6164	08/02/11
	FBP-043-02-04	ASTM D6164	07/26/11
	FBP-043-02-01	ASTM D6164	08/02/11
	FBP-042-02-01	ASTM D6164	07/26/11
	FBP-042-02-02	ASTM D6164	07/27/11
	FBP-058-02-01	ASTM D4601	12/12/08
	FBP-057-02-01	ASTM D2178	12/12/08
	FBP-056-02-01	ASTM D2178	12/12/08
	FBP-087-02-01	ASTM D4798	03/22/13
	FBP-088-02-01	ASTM D4798	03/22/13
	FBP-106-02-01	TAS 114(J)	04/19/13
	FBP-109-02-01	TAS 114(J)	04/19/13
	FBP-113-02-01	TAS 114(J)	04/17/13
	FBP-114-02-01	TAS 114(J)	
	FBP-118-02-01 Rev.1	TAS 114(J)	01/02/14
	FBP-123-02-01	TAS 114(J)	07/26/13
	FBP-118-02-01	TAS 114(J)	01/02/14
	FBP-124-02-01	TAS 114(J)	08/02/13
	FBP-126-02-01	ASTM D6163	12/03/13
	FBP-127-02-01	ASTM D6164	11/20/13
	FBP-130-02-01	TAS 114(D)	08/23/14
	FBP-132-02-01	TAS 114(D)	08/23/14
	FBP-133-02-01 Rev.3	TAS 114(J)	02/10/14
	FBP-133-02-02 Rev.1	TAS 114(J)	01/02/14
	FBP-141-02-01	TAS 114(J)	12/18/13
	FBP-142-02-01 Rev.1	TAS 114(J)	01/02/14
	FBP-142-02-02 Rev.1	TAS 114(J)	10/01/13
	FBP-152-02-01	TAS 114(D)	12/18/13
	FBP-059-02-01.4	ASTM D903/D1876/D5147	06/03/14
		TAS 117(B)/114(D) &(H)	

APPROVED ASSEMBLIES

Membrane Type: SBS

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(1): One or more layers of insulation adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer

**Insulation Fasteners
(Table 3)**

**Fastener
Density/ft²**

ISO 95+ GL or RESISTA

Minimum 1.5" thick

N/A

N/A

Top Insulation Layer

**Insulation Fasteners
(Table 3)**

**Fastener
Density/ft²**

DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board

Minimum ¼" thick

N/A

N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of insulation. All insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-25 lbs./100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of Firestone SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, or SBS Smooth sheet fully adhered to the top insulation layer in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-25 lbs./sq.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.
Or
(Optional) One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Membrane: One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3 in. wide side laps.
Or
One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Maximum Design

Pressure: -45 psf. (See General Limitation #9)



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Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(2): One or more layers of insulation adhered with approved adhesive.
All General and System Limitations apply.

Primer: (Optional) Concrete deck primed using ASTM D41 primer

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
RESISTA		
Minimum 1.5" thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
RESISTA		
Minimum 1.5" thick	N/A	N/A
Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
Tapered RESISTA		
1/2" start with 1/4" taper	N/A	N/A

Note: Insulation shall be adhered to the deck with I.S.O. Twin Pack Insulation Adhesive applied in 1/2 - 3/4" wide ribbons spaced 12 in. o.c. or with I.S.O. Stick or I.S.O. FIX II applied in 3/4-1" ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

System 1: One or more plies of Firestone SBS Base, SBS Premium Base, SBS PolyBase,
Base Sheet: SBS Premium Poly Base, or SBS Smooth sheet fully adhered with Firestone
Multi-Purpose MB Cold Adhesive applied at 1 1/2 - 2 gal./sq

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base,
SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, MB Base, fully adhered
with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0
gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or
hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3
in. wide side laps.
Or
(Optional) One or more plies of SBS Glass Torch Base, SBS Poly Base Torch,
SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Membrane: One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap
UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite,
SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with
Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or
LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt
applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3 in. wide side
laps.
Or
One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch,
SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite,
SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS
Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.



System 2:
Base Sheet: One or more plies of Firestone APP 80 Glass Base, sheet fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at 1½ - 2 gal./sq.

Membrane: One ply of Firestone APP 170 Cool, APP 180 Cool or APP 180 FR Cool fully adhered to the base sheet with Firestone Multi-Purpose MB Cold Adhesive applied at 1½ - 2 gal./sq.

Surfacing: (Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following to obtain required fire classification.

1. Gravel or slag at 400 lbs./sq. or 300 lbs./sq, respectively, in a flood coat of approved asphalt at 60 lbs./sq.
2. Karnak 97 Fibrated Aluminum Asphalt Roof Coating or Asbestos Free Aluminum Roof Coating at 1½ gal./sq.

Maximum Design
Pressure: -52.5 psf. (See General Limitation #9)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(3): One or more layers of insulation adhered with approved adhesive.
All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL or RESISTA		
Minimum 1.5" thick	N/A	N/A

Note: Insulation shall be adhered to the deck with I.S.O. FIX II applied in ¾ in. wide ribbons spaced 8 in. o.c., or I.S.O. Stick in ¾-1" ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

System 1:

Base Sheet:	One or more plies of Firestone SBS Base, SBS Smooth, SBS PolyBase, SBS Premium Poly Base, or SBS Premium Base sheet fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at 1½ - 2 gal./sq.
Ply sheet:	<p>(Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.</p> <p>Or</p> <p>(Optional) One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.</p>
Membrane:	<p>One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3 in. wide side laps.</p> <p>Or</p> <p>One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.</p>

System 2:
Base Sheet: One or more plies of Firestone APP 80 Glass Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at 1½ - 2 gal./sq.
Membrane: One ply of Firestone APP Premium FR, APP 170 Cool, APP 180 Cool or APP 180 FR Cool fully adhered to the base sheet with Firestone Multi-Purpose MB Cold Adhesive applied at 1½ - 2 gal./sq.
Surfacing: (Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following to obtain required fire classification.
1. Gravel or slag at 400 lbs./sq. or 300 lbs./sq, respectively, in a flood coat of approved asphalt at 60 lbs./sq.
2. Karnak 97 Fibrated Aluminum Asphalt Roof Coating or Asbestos Free Aluminum Roof Coating at 1½ gal./sq.
Maximum Design Pressure: -67.5 psf. (See General Limitation #9)

Membrane Type: APP/SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(4): One or more layers of insulation adhered with approved adhesive.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL or RESISTA Minimum 1.5" thick	N/A	N/A

Note: Insulation shall be adhered to an ASTM D41 primed deck with I.S.O. Twin Pack Insulation Adhesive applied in ½ - ¾" wide ribbons spaced 12 in. o.c. or I.S.O. Stick in ¾-1" ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One or more plies of Firestone APP Premium Base, APP 160 Cool, APP 170 Cool, Ply IV, Ply IV (4) M, Ply VI or Ply VI (6) M Felt, MB Base M, SBS Base, SBS Poly Base, SBS Premium Poly Base, SBS Smooth. or SBS Premium Base sheet fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at 1½ - 2 gal./sq.

Ply sheet: (Optional – not with APP sheets) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.
 Or
 (Optional – not with APP sheets) One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Membrane: (Not with APP sheets) One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3 in. wide side laps.
 Or
 (Not with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.
 Or
 (Not for use over SBS sheets) One ply of Firestone APP Premium FR, APP 170 Cool, APP 180 Cool or APP 180 FR Cool fully adhered to the base sheet with Firestone Multi-Purpose MB Cold Adhesive applied at 1½ - 2 gal./sq.

Surfacing: (Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following to obtain required fire classification.

1. Gravel or slag at 400 lbs./sq. or 300 lbs./sq, respectively, in a flood coat of approved asphalt at 60 lbs./sq.
2. Karnak 97 Fibrated Aluminum Asphalt Roof Coating or Asbestos Free Aluminum Roof Coating at 1½ gal./sq.

Maximum Design
Pressure: -67.5 psf. (See General Limitation #9)

Membrane Type: SBS/APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(5): One or more layers of insulation adhered with approved adhesive.
All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD		
Minimum ½" thick	N/A	N/A

Note: Insulation shall be adhered to the deck with I.S.O. Stick applied in ¾-1" ribbons spaced 12" o.c. or I.S.O. FIX II applied in ¾-1" ribbons spaced 4" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment

Base Sheet: One or more plies of Firestone APP Premium base, APP 160 Cool, App 170 Cool, SBS Base, SBS PolyBase, SBS Premium Poly Base, SBS Smooth, SBS Premium Base, MB Base M, APP 80 Glass Base or fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at 1½ - 2 gal./sq.

Ply sheet: (Optional – not with APP 80 Glass Base) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.
 Or
 (Optional – not with APP 80 Glass Base) One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Membrane: (Not with APP 80 Glass Base) One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3 in. wide side laps.
 Or
 (Not with APP 80 Glass Base) One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Or
(Only for use over APP 80 Glass Base) One ply of Firestone APP Premium FR, APP 170 Cool, APP 180 Cool or APP 180 FR Cool fully adhered to the base sheet with Firestone Multi-Purpose MB Cold Adhesive applied at 1½ - 2 gal./sq.

Surfacing: (Optional) Install one of the following to obtain required fire classification.

1. Roof Gravel in Firestone Multi-Purpose MB Cold Adhesive.
2. Roof Gravel in a flood coat of approved asphalt.

Maximum Design
Pressure: -67.5 psf. (See General Limitation #9)

Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(6): One or more layers of insulation adhered with approved asphalt or adhesive.
All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL		
Minimum 1.5" thick	N/A	N/A
RESISTA (Not for use with TITASET / CR-20 Adhesive)		
Minimum 1.5" thick	N/A	N/A

Note: Base insulation layer shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs./100 ft². or with I.S.O. Stick in ¾-1" ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
FiberTop E, Approved HD Wood Fiber Board		
Minimum ½" thick	N/A	N/A

Note: Top insulation layer shall be adhered in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs./100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One or more plies of Firestone Ply IV , Ply VI , Ply IV (4) M, or Ply VI (6) M felt fully adhered in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs./100 ft².

Membrane: One ply of Firestone APP 180, APP 180-P, APP 180 UltraWhite, APP 180 FR, APP 180 FR UltraWhite, torch applied.

Surfacing: (Optional) Install one of the following to obtain required fire classification. Any coating, listed below, used as a surfacing, must be listed within a current NOA.

1. Gravel or slag at 400 lbs./sq. or 300 lbs./sq, respectively, in a flood coat of approved asphalt at 60 lbs./sq.
2. Karnak 97 Fibrated Aluminum Asphalt Roof Coating or Asbestos Free Aluminum Roof Coating at 1½ gal./sq.

Maximum Design Pressure: -97.5 psf. (See General Limitation #9)

Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(7): One or more layers of insulation adhered with approved asphalt.
All General and System Limitations apply.

Barrier: (Optional) One ply of Firestone MB Base or Firestone Ply IV , Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet adhered to the properly primed deck in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam-II		
Minimum 1.3" thick	N/A	N/A
ISO 95+ GL or RESISTA		
Minimum 1.4" thick	N/A	N/A
Approved Perlite		
Minimum ¾" thick	N/A	N/A
Approved High Density Wood Fiberboard		
Minimum ½" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Approved Perlite		
Minimum ¾" thick	N/A	N/A
Approved High Density Wood Fiberboard		
Minimum ½" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of vapor barrier or insulation. All insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs./100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels used as a top layer shall be placed with the polyisocyanurate side facing down.

Base Sheet: One ply of Firestone MB Base, Ply IV , Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: (Optional) One or more plies of Firestone MB Base, Ply IV , Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet or other listed base sheet applied in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.; or one ply Firestone APP 160-P torch applied.

Membrane: One ply of Firestone APP 180, APP 180-P, APP 180 UltraWhite, APP 180 FR, APP 180 FR UltraWhite, applied by torch parallel to the base ply, with the overlaps staggered 12".

Surfacing: (Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag at 400 lbs. and 300 lbs., respectively, in a flood coat of approved asphalt at an application rate of 60 lbs./sq.
2. Karnak No. 97, No. 97 AF or No. 169, or APOC #212 at an application rate of 1½ gal./sq.

Maximum Design Pressure: -120 psf. (See General Limitation #9)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(8): One or more layers of insulation adhered with approved asphalt.
All General and System Limitations apply.

One or more layers of any of the following insulations:

Barrier: (Optional) One ply of Firestone MB Base, Firestone SBS Base or Firestone Ply IV , Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet adhered to the properly primed concrete deck with a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam-II Minimum 1.3" thick	N/A	N/A
ISO 95+ GL or RESISTA Minimum 1.4" thick	N/A	N/A
Approved Perlite Minimum ¾" thick	N/A	N/A
Approved High Density Wood Fiberboard Minimum ½" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Approved Perlite Minimum ¾" thick	N/A	N/A
Approved High Density Wood Fiberboard Minimum ½" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of vapor barrier or insulation. All insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs./100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels used as a top layer shall be placed with the polyisocyanurate side facing down.

Base Sheet: One ply of Firestone MB Base, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, SBS Smooth, Ply IV , Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.
Or
One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

- Membrane: One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3 in. wide side laps.
- Or
- One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.
- Surfacing: (Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:
1. Gravel or slag at 400 lbs. and 300 lbs., respectively, set in a flood coat of type III or IV asphalt at 60 lbs./sq.
 2. Karnak No. 97, No. 97 AF at an application rate of 1½ gal./sq.
- Maximum Design Pressure: -120 psf. (See General Limitation #9)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated, New Construction or Reroof
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(9): All layers of insulation adhered with approved asphalt.
Vapor Barrier: (Optional) Two plies of Firestone Ply IV (4) M or Ply VI (6) M ply sheet adhered to the properly primed concrete deck with a full mopping of approved asphalt applied at a rate of 20-25 lbs./sq.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL or RESISTA Minimum 1.5" thick	N/A	N/A
Middle Insulation Layer(Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
Tapered ISO 95+ GL or RESISTA 1/2" start with 1/4" taper	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL or RESISTA Minimum 1.5" thick	N/A	N/A
FiberTop E Minimum 1/2" thick	N/A	N/A
Approved Perlite Minimum 3/4" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of vapor barrier or insulation. All insulation shall be adhered to the deck in full mopping of approved asphalt at a rate of 20-25 lbs./100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate.

Base Sheet: Two or more plies of SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, SBS Smooth, MB Base M, Ply IV , Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet adhered to top insulation layer with a full mopping of approved asphalt applied at a rate of 20-25 lbs./sq.

Ply sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.
Or
One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Membrane: One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3 in. wide side laps.
Or
One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Surfacing: (Optional) Install one of the following to obtain required fire classification.
1. Roof Gravel at 400 lbs./sq. in a flood coat of approved asphalt

Maximum Design Pressure: -120 psf. (See General Limitation #9)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(10): All layers of insulation adhered with approved adhesive.
All General and System Limitations apply.

Vapor Barrier: (Optional) Firestone MB Base M base sheet adhered to primed concrete deck with I.S.O. Twin Pack Insulation Adhesive applied in ½” to ¾” wide ribbons spaced 12” o.c. or one ply of Firestone SBS Poly Torch Base or SBS Glass Torch Base sheet, torch applied.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL or RESISTA Minimum 1.5” thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL or RESISTA Minimum 1.5” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck or SECUROCK Gypsum-Fiber Roof Board Minimum ¼” thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of vapor barrier or insulation. All insulation shall be adhered to the deck with I.S.O. Twin Pack Insulation Adhesive applied in ½ - ¾” wide ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate.

Base Sheet: One or more plies of Firestone SBS Poly Torch Base, SBS Glass Torch Base, or SBS Glass Torch Base 1.5 sheet is torch adhered to the coverboard.

Ply sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.
 Or
 One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Membrane: One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3 in. wide side laps.

Or

One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Surfacing: (Optional) Install one of the following to obtain required fire classification. Any coating, listed below, used as a surfacing, must be listed within a current NOA.

1. Roof Gravel in Firestone Multi-Purpose MB Cold Adhesive
2. Roof Gravel in a flood coat of approved asphalt
3. Karnak 169 Aluminum Coating

Maximum Design Pressure: -127.5 psf. (See General Limitation #9)

Membrane Type: SBS

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(11): Base sheet adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL or RESISTA		
Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck, DensDeck Prime, or SECUROCK Gypsum-Fiber Roof Board		
Minimum ¼" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of insulation. All insulation shall be adhered to the deck in full mopping of approved asphalt at a rate of 20-25 lbs./100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet:	One or more plies of Firestone SBS Poly Torch Base, SBS Glass Torch Base, or Glas Torch Base 1.5 sheet is torch adhered to the coverboard.
Ply sheet:	(Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps. Or One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.
Membrane:	One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3 in. wide side laps. Or One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.
Surfacing:	(Optional) Install one of the following to obtain required fire classification. Any coating, listed below, used as a surfacing, must be listed within a current NOA. <ol style="list-style-type: none">1. Roof gravel at 400 lbs./sq. in a flood coat of approved asphalt.2. Roof Gravel in Firestone Multi-Purpose MB Cold Adhesive applied at 2.5 gal./sq.
Maximum Design Pressure:	-127.5 psf. (See General Limitation #9)



Membrane Type: APP/SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(12): One or more layers of insulation adhered with approved asphalt or adhesive.
All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL		
Minimum 1.5" thick	N/A	N/A
RESISTA		
Minimum 1.5" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs./100 ft². or I.S.O. Stick in ¾-1" ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One or more plies of Firestone Ply IV , Ply VI , Ply IV (4) M or Ply VI (6) M felt fully adhered in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs./100 ft².

Membrane: One ply of Firestone SBS Premium FR Torch, SBS Premium FR Torch UltraWhite, APP 180, APP 180-P, APP 180 UltraWhite, APP 180 FR or APP 180 FR UltraWhite torch applied to the base sheet
OR
One ply of Firestone SBS Cap, SBS Cap UltraWhite, SBS Premium adhered in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs./100 ft².

Surfacing: (Optional) Install one of the following to obtain required fire classification. Any coating, listed below, used as a surfacing, must be listed within a current NOA.

1. Gravel or slag at 400 lbs./sq. or 300 lbs./sq, respectively, in a flood coat of approved asphalt at 60 lbs./sq.
2. Karnak 97 Fibrated Aluminum Asphalt Roof Coating or Asbestos Free Aluminum Roof Coating at 1½ gal./sq.

Maximum Design Pressure: -150 psf. with OlyBond 500 or I.S.O. Stick (See General Limitation #9)
-210 psf. with Asphalt or TITE-SET or CR-20 (See General Limitation #9)

Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(13): All layers of insulation adhered with approved adhesive.
All General and System Limitations apply.

Vapor Barrier: Firestone MB Base M base sheet adhered to primed concrete deck with I.S.O. Twin Pack Insulation Adhesive applied in ½” to ¾” wide ribbons spaced 12” o.c. or one ply of Firestone SBS Poly Torch Base or SBS Glass Torch Base sheet, torch applied.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL or RESISTA Minimum 1.5” thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL or RESISTA Minimum 1.5” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck, DensDeck Prime, or SECUROCK Gypsum-Fiber Roof Board Minimum ¼” thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of vapor barrier. All insulation shall be adhered to the deck with I.S.O. Twin Pack Insulation Adhesive applied in ½ - ¾” wide ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate.

Base Sheet: One ply of Firestone APP 160-P torch applied.
Membrane: One ply of Firestone APP 180, APP 180-P, APP 180 UltraWhite, APP 180 FR, APP 180 FR UltraWhite, torch applied.
Surfacing: (Optional) Install one of the following to obtain required fire classification. Any coating, listed below, used as a surfacing, must be listed within a current NOA.
1. Roof Gravel in Firestone Multi-Purpose MB Cold Adhesive
2. Roof Gravel in a flood coat of approved asphalt
3. Karnak 169 Aluminum Coating
Maximum Design Pressure: –232.5 psf. (See General Limitation #9)

Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(14): Base sheet adhered with approved asphalt.
All General and System Limitations apply.

Vapor Barrier: Firestone MB Base M base sheet adhered to primed concrete deck with I.S.O. Twin Pack Insulation Adhesive applied in ½” to ¾” wide ribbons spaced 12” o.c. or one ply of Firestone SBS Poly Torch Base or SBS Glass Torch Base sheet, torch applied.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL or RESISTA Minimum 1.5” thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL or RESISTA Minimum 1.5” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck, DensDeck Prime, or SECUROCK Gypsum-Fiber Roof Board Minimum ¼” thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of vapor barrier. All insulation shall be adhered to the deck with I.S.O. Twin Pack Insulation Adhesive applied in ½ - ¾” wide ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate.

Base Sheet: A perforated ASTM D4897, Type II approved base sheet shall be laid over the top insulation layer prior to the application of the succeeding sheets.

Ply Sheet: One ply of Firestone Ply IV , Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet applied in a full mopping of approved asphalt applied at a rate of 20-25 lbs./sq.

Membrane: One ply of Firestone APP 180, APP 180-P, APP 180 UltraWhite, APP 180 FR, APP 180 FR UltraWhite, torch applied.

Surfacing: (Optional) Install one of the following to obtain required fire classification. Any coating, listed below, used as a surfacing, must be listed within a current NOA.

1. Roof Gravel in Firestone Multi-Purpose MB Cold Adhesive
2. Roof Gravel in a flood coat of approved asphalt
3. Karnak 169 Aluminum Coating

Maximum Design Pressure: –232.5 psf. (See General Limitation #9)



Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(15): Base sheet adhered with approved asphalt.
All General and System Limitations apply.

Vapor Barrier: One ply of Firestone MB Base M, SBS Base, SBS PolyBase, or SBS Premium Base are fully adhered with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2 gal./square.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL or RESISTA Minimum 1” thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL or RESISTA Minimum 1” thick	N/A	N/A
Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck, DensDeck Prime, or SECUROCK Gypsum-Fiber Roof Board Minimum ¼” thick	N/A	N/A
ISOGARD HD Minimum ½” thick	N/A	N/A

Note: Base insulation shall be adhered to the deck with I.S.O. Twin Pack Insulation Adhesive or I.S.O. Stick applied in continuous ¾” – 1” wide ribbons spaced 12 in. o.c. Top insulation shall be adhered to the deck with I.S.O. Twin Pack Insulation Adhesive applied in ½ - ¾” wide ribbons spaced 12 in. o.c. or with I.S.O. Stick applied in continuous ¾” – 1” wide ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate.

Base Sheet: One or more plies of Firestone Ply IV (4) M, Ply VI (6) M, Or One ply of Firestone MB Base M, SBS Base, SBS PolyBase, or SBS Premium Base are fully adhered with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2 gal./square.

Membrane: Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite is fully adhered with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2 gal./square. The minimum 3 in. wide side laps are sealed with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2 gal./square.

OR

(Only with Type IV or Type VI felts) One ply of Firestone SBS Torch, SBS Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS Premium FR Torch or SBS Premium FR Torch UltraWhite cap sheet torch adhered to the ply sheet with the 3" side laps heat fused with a torch.

OR

(Only with Type IV or Type VI felts) One ply of Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite fully adhered to the base sheet with hot asphalt adhesive applied within the EVT range and at a rate of 20-40 lbs./sq

OR

(Only with Type IV or Type VI felts) One ply of Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR or SBS Premium FR UltraWhite cap sheet fully adhered to the base sheet with Firestone Multi-Purpose MB Cold Adhesive applied at 1½ - 2 gal./sq

Surfacing: (Optional) Install one of the following to obtain required fire classification.

1. Roof Gravel at 400 lbs./sq. in a flood coat of approved asphalt

Maximum Design
Pressure:

-240 psf. (See General Limitation #9)

Membrane Type: APP

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(16): One or more layers of insulation adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA or other Approved polyisocyanurate listed in Table 2		
Minimum ½" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Approved High Density Wood Fiberboard		
Minimum ½" thick	N/A	N/A
Approved Perlite		
Minimum ¾" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of insulation. All insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs./100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels used as a top layer shall be placed with the polyisocyanurate side facing down.

Base Sheet: One ply of Firestone MB Base, Firestone Ply IV , Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet bonded in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: (Optional) One or more plies of Firestone MB Base, Ply IV , Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet or other listed base sheet applied in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.; or one ply Firestone APP 160-P torch applied.

Membrane: One ply of Firestone APP 180, APP 180-P, APP 180 UltraWhite, APP 180 FR, APP 180 FR UltraWhite, applied by torch parallel to the base ply, with the overlaps staggered 12".

Surfacing: (Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag at 400 lbs. and 300 lbs., respectively, in a flood coat of approved asphalt at an application rate of 60 lbs./sq.
2. Karnak No. 97, No. 97 AF or No. 169, or APOC #212 at an application rate of 1½ gal./sq.

Maximum Design Pressure:

- 255 psf. (Perlite as top insulation layer) (See General Limitation #9)
- 520 psf. (High Density Wood Fiberboard as top insulation layer) (See General Limitation #9)

MeMbrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(17): One or more layers of insulation adhered with approved asphalt.
All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA or other Approved polyisocyanurate listed in Table 2		
Minimum ½” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Approved High Density Wood Fiberboard		
Minimum ½” thick	N/A	N/A
Approved Perlite		
Minimum ¾” thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of insulation. All insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs./100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels used as a top layer shall be placed with the polyisocyanurate side facing down.

Base Sheet: One ply of Firestone MB Base or Firestone Ply IV , Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet bonded in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: (Optional) One or more plies of SBS Smooth, MB Base, Firestone Ply IV , Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet, SBS Base or other Approved base or ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: One ply of Firestone SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Smooth, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR or SBS Glass FR UltraWhite adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

OR

(Not with MB Base) One ply of Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite fully adhered with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2 gal./square. The minimum 3 in. wide side laps are sealed with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2 gal./square

OR

One ply of Firestone SBS Torch, SBS Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS Premium FR Torch or SBS Premium FR Torch UltraWhite, torch adhered

OR

(Not with SBS Base, SBS Smooth) One ply of Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR or SBS Premium FR UltraWhite cap sheet fully adhered to the base sheet with Firestone Multi-Purpose MB Cold Adhesive applied at 1½ - 2 gal./sq.

- Surfacing: (Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:
1. Gravel or slag at 400 lbs. and 300 lbs., respectively, set in a flood coat of type III or IV asphalt at 60 lbs./sq.
 2. Karnak No. 97, No. 97 AF at an application rate of 1½ gal./sq.
- Maximum Design Pressure: –255 psf. (Perlite as top insulation layer) (See General Limitation #9)
–520 psf. (High Density Wood Fiberboard as top insulation layer)
(See General Limitation #9)

Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(18): One or more layers of insulation adhered with approved asphalt.
All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL or RESISTA Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck Minimum ¼" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of insulation. All insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs./100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation panels used as a top layer shall be placed with the polyisocyanurate side facing down.

Base Sheet: One ply of Firestone MB Base or Firestone Ply IV , Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet bonded in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: (Optional) One or more plies of Firestone MB Base, Ply IV , Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet or other listed base sheet applied in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.; or one ply Firestone APP 160-P torch applied.

Membrane: One ply of Firestone APP 180, APP 180-P, APP 180 UltraWhite, APP 180 FR, APP 180 FR UltraWhite, applied by torch parallel to the base ply with the overlaps staggered 12".

Surfacing: (Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag at 400 lbs. and 300 lbs., respectively, in a flood coat of approved asphalt at an application rate of 60 lbs./sq.
2. Karnak No. 97, No. 97 AF or No. 169, or APOC #212 at an application rate of 1½ gal./sq.

Maximum Design Pressure: -225 psf. (See General Limitation #9)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(19): One or more layers of insulation adhered with approved asphalt.
All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL or RESISTA Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
DensDeck Minimum ¼" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of insulation. All insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs./100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation panels used as a top layer shall be placed with the polyisocyanurate side facing down.

Base Sheet: One ply of Firestone MB Base or Firestone Ply IV , Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet bonded in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: (Optional) One or more plies of SBS Smooth, MB Base, Firestone Ply IV , Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet, SBS Base, or other Approved base or ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: One ply of Firestone SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Smooth, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR or SBS Glass FR UltraWhite adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

OR

(Not with MB Base) One ply of Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite fully adhered with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2 gal./square. The minimum 3 in. wide side laps are sealed with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2 gal./square

OR

One ply of Firestone SBS Torch, SBS Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS Premium FR Torch or SBS Premium FR Torch UltraWhite, torch adhered

OR

(Not with SBS Base, SBS Smooth) One ply of Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR or SBS Premium FR UltraWhite cap sheet fully adhered to the base sheet with Firestone Multi-Purpose MB Cold Adhesive applied at 1½ - 2 gal./sq.

Surfacing: (Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag at 400 lbs. and 300 lbs., respectively, set in a flood coat of type III or IV asphalt at 60 lbs./sq.
2. Karnak No. 97, No. 97 AF at an application rate of 1½ gal./sq.

Maximum Design

Pressure: -225 psf (See General Limitation #9)



Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(20): Base sheet adhered with approved asphalt.
All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL or RESISTA Minimum 1" thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
Tapered ISO 95+ GL or RESISTA 1/2" start with 1/4" taper	N/A	N/A
ISO 95+ GL or RESISTA Minimum 1" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck, DensDeck Prime, or SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	N/A	N/A

Note: All insulation shall be adhered to the deck with LiquiGard Membrane Adhesive applied in continuous 3/4" – 1" wide ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate.

Base Sheet: One or more plies of Firestone Ply IV (4) M, Ply VI (6) M, Or
One ply of Firestone MB Base M, SBS Base, SBS Premium Base, SBS PolyBase, SBS Premium Poly Base or SBS Smooth are fully adhered with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2 gal./square.

Membrane: Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite is fully adhered with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2 gal./square. The minimum 3 in. wide side laps are sealed with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2 gal./square.

OR

(Only with Type IV or Type VI felts) One ply of Firestone SBS Torch, SBS Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS Premium FR Torch or SBS Premium FR Torch UltraWhite cap sheet torch adhered to the ply sheet with the 3" side laps heat fused with a torch.

OR

(Only with Type IV or Type VI felts) One ply of Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite fully adhered to the base sheet with hot asphalt adhesive applied within the EVT range and at a rate of 20-40 lbs./sq

OR

(Only with Type IV or Type VI felts) One ply of Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR or SBS Premium FR UltraWhite cap sheet fully adhered to the base sheet with Firestone Multi-Purpose MB Cold Adhesive applied at 1½ - 2 gal./sq

Surfacing: (Optional) Install one of the following to obtain required fire classification.

1. Roof Gravel at 400 lbs./sq. in a flood coat of approved asphalt

Maximum Design
Pressure:

-255 psf. (See General Limitation #9)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(21): Base sheet adhered with approved asphalt.
All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL or RESISTA Minimum 1" thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
Tapered ISO 95+ GL or RESISTA 1/2" start with 1/4" taper	N/A	N/A
ISO 95+ GL or RESISTA Minimum 1" thick	N/A	N/A
Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD Minimum 1/2" thick	N/A	N/A

Note: All insulation shall be adhered to the deck with LiquiGard Membrane Adhesive applied in continuous 3/4" – 1" wide ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate.

Base Sheet: One or more plies of Firestone Ply IV (4) M, Ply VI (6) M, or
One ply of Firestone MB Base M, SBS Base, SBS PolyBase, SBS Premium Poly
Base, SBS Smooth, or SBS Premium Base are fully adhered with LiquiGard
Membrane Adhesive squeegee applied at a rate of 1.5 – 2 gal./square.

Membrane: Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap
UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium,
SBS Premium FR, SBS Premium FR UltraWhite is fully adhered with LiquiGard
Membrane Adhesive squeegee applied at a rate of 1.5 – 2 gal./square. The
minimum 3 in. wide side laps are sealed with LiquiGard Membrane Adhesive
squeegee applied at a rate of 1.5 – 2 gal./square.

OR

(Only with Type IV or Type VI felts) One ply of Firestone SBS Torch, SBS Torch
UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Glass FR Torch, SBS
Glass FR Torch UltraWhite, SBS Premium Torch, SBS Premium Torch
UltraWhite, SBS Premium FR Torch or SBS Premium FR Torch UltraWhite cap
sheet torch adhered to the ply sheet with the 3" side laps heat fused with a torch.

OR

(Only with Type IV or Type VI felts) One ply of Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite fully adhered to the base sheet with hot asphalt adhesive applied within the EVT range and at a rate of 20-40 lbs./sq

OR

(Only with Type IV or Type VI felts) One ply of Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR or SBS Premium FR UltraWhite cap sheet fully adhered to the base sheet with Firestone Multi-Purpose MB Cold Adhesive applied at 1½ - 2 gal./sq

Surfacing: (Optional) Install one of the following to obtain required fire classification.

1. Roof Gravel at 400 lbs./sq. in a flood coat of approved asphalt

Maximum Design
Pressure: -292.5 psf. (See General Limitation #9)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(22): Insulation adhered with approved adhesive.
All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 2" thick	N/A	N/A
RESISTA (Not for use with TITE-SET / CR-20 Adhesive) Minimum 2" thick	N/A	N/A

Note: Base insulation layer shall be adhered to the deck with I.S.O. Stick, I.S.O. FIX II, or I.S.O. Twin Pack Insulation Adhesive in ribbons 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK Gypsum-Fiber Roof Board Minimum ¼" thick	N/A	N/A

Note: Top insulation layer shall be adhered with I.S.O. Stick, I.S.O. FIX II, or I.S.O. Twin Pack Insulation Adhesive in ribbons 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Primer: (Optional) SECUROCK Gypsum-Fiber Roof Board may be primed with ASTM D41 asphalt primer and allowed to dry prior to application of base sheet

Base Sheet: One or more plies of Firestone SBS Glass Torch Base or SBS Poly Torch Base torch applied.

Membrane: One ply of Firestone SBS Premium FR Torch or SBS Premium FR Torch UltraWhite, torch applied.

Surfacing: (Optional) Install one of the following to obtain required fire classification. Any coating, listed below, used as a surfacing, must be listed within a current NOA.

1. Gravel or slag at 400 lbs./sq. or 300 lbs./sq, respectively, in a flood coat of approved asphalt at 60 lbs./sq.
2. Karnak 97 Fibrated Aluminum Asphalt Roof Coating or Asbestos Free Aluminum Roof Coating at 1½ gal./sq.

Maximum Design Pressure: -540 psf. with OlyBond (See General Limitation #9)
-442.5 psf. with all other ribbon adhesives (See General Limitation #9)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(23): Insulation adhered with approved asphalt.
All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL or RESISTA		
Minimum 2" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of insulation. Base insulation layer shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 25 lbs./100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK Gypsum-Fiber Roof Board		
Minimum ¼" thick	N/A	N/A

Note: Top insulation layer shall be adhered in full mopping of approved asphalt within the EVT range and at a rate of 25 lbs./100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Primer: (Optional) SECUROCK Gypsum-Fiber Roof Board may be primed with ASTM D41 asphalt primer and allowed to dry prior to application of base sheet

Base Sheet: One or more plies of Firestone SBS Glass Torch Base, SBS Glass Torch Base 1.5, or SBS Poly Torch Base torch applied.

Membrane: One ply of Firestone SBS Premium FR Torch or SBS Premium FR Torch UltraWhite, torch applied.

Surfacing: (Optional) Install one of the following to obtain required fire classification. Any coating, listed below, used as a surfacing, must be listed within a current NOA.

1. Gravel or slag at 400 lbs./sq. or 300 lbs./sq, respectively, in a flood coat of approved asphalt at 60 lbs./sq.
2. Karnak 97 Fibrated Aluminum Asphalt Roof Coating or Asbestos Free Aluminum Roof Coating at 1½ gal./sq.

Maximum Design Pressure: -532.5 psf. (See General Limitation #9)

Membrane Type: SBS

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(24): Insulation adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
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ISO 95+ GL or RESISTA

Minimum 1½" thick	N/A	N/A
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Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of insulation. Base insulation layer shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 25 lbs./100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
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SECUROCK Gypsum-Fiber Roof Board

Minimum ¼" thick	N/A	N/A
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Base Sheet: One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Or

One or more plies of SBS Glass Torch Base, SBS Poly Torch Base, or SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Ply Sheet: One or more plies of SBS Smooth, SBS Base, SBS Premium Poly Base, SBS Poly Base, SBS Premium Base fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Or

One or more plies of SBS Glass Torch Base, SBS Poly Torch Base, or SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Membrane: One ply of SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Or

One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Maximum Design

Pressure: -52.5 psf. (See General Limitation #9)

Membrane Type: SBS

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(25): Insulation adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL		
Minimum 1½” thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of insulation. Base insulation layer shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-25 lbs./100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Tapered		
Minimum ½” thick start with ¼” per ft. taper	N/A	N/A

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum ¼” thick	N/A	N/A

Note: Middle and Top insulation layer shall be adhered in full mopping of approved asphalt within the EVT range and at a rate of 20-25 lbs./100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of MB Base M, SBS Base, SBS Poly Base, SB S Premium Base, SBS Premium Poly Base or SBS Smooth fully adhered with hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Poly Base, SBS Poly Base, SBS Premium Base fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.
Or
(Optional) One or more plies of SBS Glass Torch Base, SBS Poly Torch Base, or SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Membrane: One ply of SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.



Or

One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Maximum Design

Pressure: -120 psf. (See General Limitation #9)



Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(26): Insulation adhered with approved asphalt.
All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL		
Minimum 1½” thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of insulation. Base insulation layer shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 25 lbs./100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum ¼” thick	N/A	N/A

Note: Top insulation layer shall be adhered in full mopping of approved asphalt within the EVT range and at a rate of 20-25 lbs./100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One or more plies of SBS Glass Torch Base, SBS Poly Torch Base, or SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Ply Sheet: One or more plies of SBS Smooth, SBS Base, SBS Premium Poly Base, SBS Poly Base, SBS Premium Base fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.
Or
One or more plies of SBS Glass Torch Base, SBS Poly Torch Base, or SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Membrane: One ply of SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.
Or
One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Maximum Design Pressure: -127.5 psf. (See General Limitation #9)



Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(27): One or more layers of insulation adhered with approved asphalt or adhesive.
All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	N/A	N/A

Note: All insulation shall be adhered to the deck with I.S.O. Fix II, I.S.O. Twin Pack Insulation Adhesive, or I.S.O. Stick in 3/4" wide ribbons spaced a maximum 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 Cool, APP 170, APP 170 Cool, or APP 160 P torch adhered.

Membrane: One ply of APP Premium FR, APP 180 or APP 180 FR torch adhered.

Maximum Design Pressure: -462.5 psf. (See General Limitation #9)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(28): Insulation adhered with approved asphalt.
All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL		
Minimum ½" thick	N/A	N/A
Middle Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL		
Minimum 1" thick	N/A	N/A

Note: Base and Middle insulation shall be adhered to the deck with I.S.O. Stick in ¾" to 1" wide ribbons spaced a maximum 6" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK Gypsum-Fiber Roof Board		
Minimum ¼" thick	N/A	N/A

Note: Top insulation shall be adhered to the deck with I.S.O. Stick in ¾" to 1" wide ribbons spaced a maximum 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One or more plies of SBS Smooth, SBS Base, SBS Premium Poly Base, SBS Poly Base, SBS Premium Base fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq.

Membrane: One ply of SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive (except SBS Poly Base) applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Or

One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Maximum Design Pressure: -317.5 psf. (See General Limitation #9)



Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(29): One or more layers of insulation adhered with approved asphalt or adhesive.
All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK Gypsum-Fiber Roof Board Minimum ¼" thick	N/A	N/A

Note: All insulation shall be adhered to the deck with I.S.O. Fix II, I.S.O. Twin Pack Insulation Adhesive, or I.S.O. Stick in ¾" wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One or more plies of SBS Glass Torch Base, Glass Torch Base 1.5, SBS Poly Torch Base torch adhered.
Or
SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, SBS Smooth adhered in Firestone Multi-Purpose MB Cold Adhesive applied a rate of 1.5-2.0 gal./sq. or mopping asphalt applied within the EVT range at a rate of 20-40 lbs./sq.

Membrane: One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3 in. wide side laps.
Or
One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Maximum Design Pressure: -400 psf. (See General Limitation #9)

Membrane Type: SBS

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type B(1): Base layer of insulation mechanically fastened, top layer of insulation adhered with approved adhesive.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL or RESISTA Minimum 2" thick	2 or 3 with 7	1:2 ft²

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	N/A	N/A

Note: Top layer of insulation shall be adhered with I.S.O. Twin Pack Insulation Adhesive applied in 1/2 - 3/4" wide ribbons spaced 12 in. o.c. or I.S.O. FIX II or I.S.O. Stick applied in 3/4" – 1" wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of Firestone SBS Base, SBS PolyBase, SBS Premium Poly Base, SBS Premium Base or SBS Smooth fully adhered with Firestone Multi-Purpose MB Cold Adhesive squeegee applied at 1 1/2 - 2 gal./sq.

Ply sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.
Or
(Optional) One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Membrane: One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3 in. wide side laps.
Or
One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Surfacing: (Optional) Install one of the following to obtain required fire classification.

1. Roof gravel in a flood coat of approved asphalt
2. Roof gravel in Firestone Multi-Purpose MB Cold Adhesive (SBS roof covers)

Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: SBS

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type B(2): Base layer of insulation mechanically fastened, top layer of insulation adhered with approved adhesive.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	2 or 3 with 7	1:2 ft²
Middle Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL or RESISTA Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board Minimum ¼" thick	N/A	N/A
FiberTop E Minimum ½" thick	N/A	N/A

Note: Insulation shall be adhered to the deck with I.S.O. Twin Pack Insulation Adhesive applied in ½ - ¾" wide ribbons spaced 12 in. o.c. or with I.S.O. Stick or I.S.O. FIX II applied in ¾-1" ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment

Base Sheet: One ply of Firestone SBS Base, SBS Premium Base, SBS Premium Poly Base, SBS Poly Base, SBS Smooth, Ply IV , Ply VI , Ply IV (4) M, or Ply VI (6) M felt fully adhered in full mopping of approved asphalt within the EVT range and at a rate of 20-25 lbs./sq.

Or

One or more plies of Firestone SBS Poly Torch Base, SBS Glass Torch Base, or Glass Torch Base 1.5 sheet, torch applied.

Ply sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Or

(Optional) One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Membrane: One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3 in. wide side laps.
Or
One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Surfacing: (Optional) Install one of the following to obtain required fire classification.

1. Roof Gravel in Firestone Multi-Purpose MB Cold Adhesive
2. Roof Gravel in a flood coat of approved asphalt

Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: SBS

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type B(3): Base layer of insulation mechanically fastened, top layer of insulation adhered with approved adhesive.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL or RESISTA Minimum 1.5" thick	2 or 3 with 7	1:2.7 ft²
ISO 95+ GL or RESISTA Minimum 2" thick	2 or 3 with 7	1:4 ft²

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	N/A	N/A
ISOGARD HD Minimum 1/2" thick	N/A	N/A

Note: Top layer of insulation shall be adhered with LiquiGard Membrane Adhesive applied in continuous 3/4" – 1" wide ribbons spaced at a maximum 12 in. o.c. or applied with I.S.O. Twin Pack Insulation Adhesive applied in 1/2 - 3/4" wide ribbons spaced 12 in. o.c. or I.S.O. FIX II or I.S.O. Stick applied in 3/4" – 1" wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of Firestone Ply IV M, Ply VI (6) M, MB Base M, SBS Base, SBS PolyBase, SBS Premium Poly Base, SBS Smooth or SBS Premium Base are fully adhered with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2 gal./square.

Ply sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Or

(Optional) One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Membrane: One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3 in. wide side laps.
Or
One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Surfacing: (Optional) Install one of the following to obtain required fire classification.

1. Roof Gravel at 400 lbs./sq. in a flood coat of approved asphalt

Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: APP

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type B(4): Base layer of insulation mechanically fastened, top layer of insulation adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, RESISTA, or any Approved Polyisocyanurate listed in Table 2		
Minimum 1.5" thick	2 or 3 with 7	1:2 ft ²

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
Approved Perlite		
Minimum ¾" thick	N/A	N/A
Approved High Density Wood Fiberboard		
Minimum ½" thick	N/A	N/A

Note: Top layer of insulation shall be adhered with approved hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Ply Sheet: One or more plies in any combination of the following: Firestone MB Base or Firestone Ply IV , Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet bonded in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply Firestone APP 160-P torch applied.

Membrane: One ply of APP 180, APP 180-P, APP 180 UltraWhite, APP 180 FR, APP 180 FR UltraWhite, torch applied parallel to the base ply, with overlaps staggered 12".

Surfacing: (Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag at 400 lbs. and 300 lbs., respectively, set in a flood coat of type III or IV asphalt at 60 lbs./sq.
2. Karnak No. 97, No. 97 AF or No. 169 at an application rate of 1½ gal./sq.

Maximum Design Pressure: -52.5 psf. (See General Limitation #7)

Membrane Type: SBS

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type B(5): Base layer of insulation mechanically fastened, top layer of insulation adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA or any Approved Polyisocyanurate listed in Table 2		
Minimum 1.5" thick	2 or 3 with 7	1:2 ft²

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Approved Perlite		
Minimum ¾" thick	N/A	N/A
Approved High Density Wood Fiberboard		
Minimum ½" thick	N/A	N/A

Note: Top layer of insulation shall be adhered with approved hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Ply Sheet: One or more plies in any combination of the following: Firestone MB Base, SBS Base or Firestone Ply IV , Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet bonded in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Or

(Optional) One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

- Membrane: Membrane: One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3 in. wide side laps.
- Or
- One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.
- Surfacing: (Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:
1. Gravel or slag at 400 lbs. and 300 lbs., respectively, set in a flood coat of type III or IV asphalt at 60 lbs./sq.
 2. Karnak No. 97, No. 97 AF at an application rate of 1½ gal./sq.
- Maximum Design Pressure: -52.5 psf. (See General Limitation #7)

Membrane Type: SBS

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type B(6): Base layer of insulation mechanically fastened, top layer of insulation adhered with approved adhesive.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL or RESISTA Minimum 1.5" thick	2 or 3 with 7	1:1.6 ft ²

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL or RESISTA Minimum 1.5" thick	N/A	N/A

Note: Top layer of insulation shall be adhered with LiquiGard Membrane Adhesive applied in continuous $\frac{3}{4}$ " – 1" wide ribbons spaced at a maximum 12 in. o.c. or applied with I.S.O. Twin Pack Insulation Adhesive applied in $\frac{1}{2}$ - $\frac{3}{4}$ " wide ribbons spaced 12 in. o.c. or I.S.O. FIX II or I.S.O. Stick applied in $\frac{3}{4}$ " – 1" wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One or more plies of Firestone Ply IV (4) M, Ply VI (6) M, MB Base M, SBS Base, SBS PolyBase, SBS Premium Poly Base, SBS Smooth, or SBS Premium Base are fully adhered with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2 gal./square.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Or

(Optional) One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Membrane: One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3 in. wide side laps.
Or
One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Surfacing: (Optional) Install one of the following to obtain required fire classification.

1. Roof Gravel at 400 lbs./sq. in a flood coat of approved asphalt.

Maximum Design Pressure: -75 psf. (See General Limitation #7)

Membrane Type: SBS

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type B(7): Base layer of insulation mechanically attached, top layer adhered with approved adhesive. Membrane fully adhered.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA		
Minimum 1½" thick	2 or 3 with 7	1:1.6 ft²

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum ½" thick	N/A	N/A

Note: Top layer of insulation shall be adhered with I.S.O. Twin Pack Insulation Adhesive applied in ½" to ¾" wide ribbons spaced 6" o.c. (not with SECUROCK) or with I.S.O. Fix II or I.S.O. Stick applied in ¾" to 1" wide ribbons spaced 6" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet: One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Or

(Optional) One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Ply Sheet: (Optional) One or more plies of] SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Or

(Optional) One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Membrane: One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.
Or
One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Maximum Design Pressure: -52.5 psf. (See General Limitation #7)

Membrane Type:	SBS
Deck Type 3I:	Concrete Decks, Insulated
Deck Description:	2500 psi structural concrete or concrete plank
System Type B(8):	Base layer of insulation mechanically attached, top layer adhered with approved adhesive. Membrane fully adhered.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL		
Minimum 2" thick	2 or 3 with 7	1:1.6 ft²

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Middle Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL		
Minimum ½" thick	N/A	N/A

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK Gypsum-Fiber Roof Board		
Minimum ½" thick	N/A	N/A

Note: Middle and Top insulation layers shall be adhered with I.S.O. Stick applied in ¾" to 1" wide ribbons spaced 6" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet:	One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps. Or One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.
Ply Sheet:	(Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Poly Base, SBS Poly Base, SBS Premium Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps. Or (Optional) One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.



Membrane: One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Or

One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Maximum Design Pressure: -67.5 psf. (See General Limitation #7)

Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type C(1): All layers of insulation simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL or RESISTA Minimum 1.4" thick	N/A	N/A
Approved Perlite Minimum ¾" thick	N/A	N/A

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam-II, ENRGY 3, ENRGY 3 25 PSI, ISO 95+ GL, RESISTA, Multi-Max-3 Minimum 1.3" thick	2 or 3 with 7	1:2.4 ft ²
Approved Perlite Minimum ¾" thick	2 or 3 with 7	1:3 ft ²
Approved High Density Wood Fiberboard Minimum ½" thick	2 or 3 with 7	1:3 ft ²

Note: Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of Firestone MB Base, adhered with hot asphalt adhesive applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: (Optional) One or more plies of Firestone MB Base, Ply IV , Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet or other listed base sheet applied in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.; or one ply Firestone APP 160-P torch applied.

Membrane: One ply of Firestone APP 180, APP 180-P, APP 180 UltraWhite, APP 180 FR, APP 180 FR UltraWhite, applied by torch parallel to the base ply, with the overlaps staggered 12".

Surfacing: (Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag at 400 lbs. and 300 lbs., respectively, set in a flood coat of type III or IV asphalt at 60 lbs./sq.
2. Karnak No. 97, No. 97 AF or No. 169, or APOC #212 at an application rate of 1½ gal./sq.

Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type C(2): All layers of insulation simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL or RESISTA Minimum 1.4" thick	N/A	N/A
Approved Perlite Minimum ¾" thick	N/A	N/A

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL or RESISTA Minimum 1.3" thick	2 or 3 with 7	1:2.4 ft ²
Approved Perlite Minimum ¾" thick	2 or 3 with 7	1:3 ft ²
Approved High Density Wood Fiberboard Minimum ½" thick	2 or 3 with 7	1:3 ft ²

Note: Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of Firestone MB Base, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, SBS Smooth, Ply IV , Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: (Optional) One or more plies of SBS Smooth or SBS Base Sheet or Firestone Ply IV , Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

- Membrane: One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3 in. wide side laps.
- Or
- One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.
- Surfacing: (Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:
1. Gravel or slag at 400 lbs. and 300 lbs., respectively, set in a flood coat of type III or IV asphalt at 60 lbs./sq.
 2. Karnak No. 97, No. 97 AF at an application rate of 1½ gal./sq.
- Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: APP/SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type C(3): All layers of insulation simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL or RESISTA Minimum 1.5" thick	2 or 3 with 7	1:2 ft ²

Note: Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One or more plies of Firestone SBS Base, SBS PolyBase, SBS Premium Poly Base, SBS Premium Base, SBS Smooth, APP 80 Glass Base or fully adhered with Firestone Multi-Purpose MB Cold Adhesive at a rate of 1½ - 2 gal./sq.

Membrane: (Only with APP 80 Glass Base) One ply of Firestone APP Premium FR, APP 170 Cool, APP 180 Cool or APP 180 FR Cool fully adhered to the base sheet with Firestone Multi-Purpose MB Cold Adhesive at a rate of 1½ - 2 gal./sq.
OR
(Not with APP 80 Glass Base or) One ply of Firestone APP 180, APP 180-P, APP 180 UltraWhite, APP 180 FR, APP 180 FR UltraWhite, torch adhered to the base sheet.
OR
(Not with APP 80 Glass Base) One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3 in. wide side laps.
Or
(Not with APP 80 Glass Base) One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Surfacing: (Optional) Install one of the following to obtain required fire classification. Any coating, listed below, used as a surfacing, must be listed within a current NOA.

1. Gravel or slag at 400 lbs./sq. or 300 lbs./sq, respectively, in a flood coat of approved asphalt at 60 lbs./sq.
2. Karnak 97 Fibrated Aluminum Asphalt Roof Coating or Asbestos Free Aluminum Roof Coating at 1½ gal./sq.

Maximum Design Pressure: -45 psf. (See General Limitation #9)



Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type C(4): All layers of insulation simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL or RESISTA Minimum 1.5" thick	N/A	N/A

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck Prime Minimum ¼" thick	2 or 3 with 7	1:4 ft ²
SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	2 or 3 with 7	1:4 ft ²

Note: Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply Firestone APP 160-P torch applied.

Membrane: One ply of Firestone APP 180, APP 180-P, APP 180 UltraWhite, APP 180 FR, APP 180 FR UltraWhite, torch applied.

Surfacing: (Optional) Install one of the following to obtain required fire classification.
1. Roof gravel at 400 lbs./sq. in a flood coat of approved asphalt
2. Roof gravel in Firestone Multi-Purpose MB Cold Adhesive at 2.5 gal./sq

Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type C(5): All layers of insulation simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL or RESISTA		
Minimum 1.5" thick	N/A	N/A

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
DensDeck Prime		
Minimum ¼" thick	2 or 3 with 7	1:4 ft ²
SECUROCK Gypsum-Fiber Roof Board		
Minimum ½" thick	2 or 3 with 7	1:4 ft ²

Note: Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One or more plies of Firestone SBS Poly Torch Base sheet is torch adhered to the coverboard.

Ply Sheet: (Optional) One or more plies of Ply IV, Ply VI, SBS Poly Base, SBS Smooth, SBS Base, or SBS Premium Base with hot asphalt adhesive applied within the EVT range and at a rate of 20-40 lbs./sq. with a 3" lap.

Or

(Optional) One or more plies of SBS Glass Torch Base or SBS Poly Torch Base heat welded with a 3" lap.

Membrane: One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3 in. wide side laps.

Or

One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Surfacing: (Optional) Install one of the following to obtain required fire classification.

1. Roof gravel at 400 lbs./sq. in a flood coat of approved asphalt
2. Roof gravel in Firestone Multi-Purpose MB Cold Adhesive at 2.5 gal./sq

Maximum Design Pressure: -45 psf. (See General Limitation #9)



Membrane Type: APP/SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type C(6): All layers of insulation simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL or RESISTA Minimum 2" thick	2 or 3 with 7	1:1.33 ft ²

Note: Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One or more plies of Firestone SBS Base, SBS PolyBase, SBS Premium Poly Base, SBS Smooth, SBS Premium Base, APP 80 Glass Base or fully adhered with Firestone Multi-Purpose MB Cold Adhesive at a rate of 1½ - 2 gal./sq.

Membrane: (Only with APP 80 Glass Base) One ply of Firestone APP Premium FR, APP 170 Cool, APP 180 Cool or APP 180 FR Cool fully adhered to the base sheet with Firestone Multi-Purpose MB Cold Adhesive at a rate of 1½ - 2 gal./sq.
OR
(only with APP 80 Glass Base) One ply of Firestone APP 180, APP 180-P, APP 180 UltraWhite, APP 180 FR, APP 180 FR UltraWhite, torch adhered to the base sheet.
OR
(Not with APP 80 Glass Base) One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3 in. wide side laps.
Or
(Not with APP 80 Glass Base) One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Surfacing: (Optional) Install one of the following to obtain required fire classification. Any coating, listed below, used as a surfacing, must be listed within a current NOA.

1. Gravel or slag at 400 lbs./sq. or 300 lbs./sq, respectively, in a flood coat of approved asphalt at 60 lbs./sq.
2. Karnak 97 Fibrated Aluminum Asphalt Roof Coating or Asbestos Free Aluminum Roof Coating at 1½ gal./sq.

Maximum Design Pressure: -52.5 psf. (See General Limitation #7)



Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type C(7): All layers of insulation simultaneously attached.

All General and System Limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL or RESISTA		
Minimum 1.5" thick	2 or 3 with 7	1:1.8 ft ²
Minimum 1.5" thick	2 or 3 with 7	1:1.6 ft ²
Minimum 1.5" thick	2 or 3 with 7	1:1.3 ft ²
Minimum 1.5" thick	2 or 3 with 7	1:1 ft ²
Minimum 2" thick	2 or 3 with 7	1:1 ft ²

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: One ply of Firestone Ply IV (4) M, Ply VI (6) M, MB Base M, SBS Base, SBS PolyBase, SBS Premium Poly Base, SBS Smooth or SBS Premium Base are fully adhered with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2 gal./square.

Ply Sheet: (Optional) One ply of Firestone Ply IV (4) M, Ply VI (6) M, MB Base M, SBS Base, SBS PolyBase, or SBS Premium Base are fully adhered with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2 gal./square.

Membrane: One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3 in. wide side laps.
Or
One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Surfacing: (Optional) Install one of the following to obtain required fire classification.
1. Roof Gravel at 400 lbs./sq. in a flood coat of approved asphalt

Maximum Design Pressure: -60 psf. 1.5"thick – at a fastener density of 1:1.8 ft² (See General Limitation #7)
-82.5 psf. 1.5"thick – at a fastener density of 1:1.6 ft² (See General Limitation #7)
-90 psf. 1.5"thick – at a fastener density of 1:1.3 ft² (See General Limitation #7)
-97.5 psf. 1.5"thick – at a fastener density of 1:1 ft² (See General Limitation #7)
-135 psf. 2" thick – at a fastener density of 1:1 ft² (See General Limitation #7)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type C(8): All layers of insulation simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL or RESISTA Minimum 1.5" thick	N/A	N/A

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	2 or 3 with 7	See Below

Note: Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One or more plies of Firestone SBS Poly Torch Base, SBS Glass Torch Base, SBS Glass Torch Base 1.5 base sheet is torch adhered layer.

Membrane: One ply of Firestone SBS Premium FR Torch or SBS Premium FR Torch UltraWhite cap sheet torch adhered to the base sheet.

Surfacing: (Optional) Install one of the following to obtain required fire classification. Any coating, listed below, used as a surfacing, must be listed within a current NOA.

1. Gravel or slag at 400 lbs./sq. or 300 lbs./sq, respectively, in a flood coat of approved asphalt at 60 lbs./sq.
2. Karnak 97 Fibrated Aluminum Asphalt Roof Coating or Asbestos Free Aluminum Roof Coating at 1½ gal./sq.

Maximum Design Pressure:
-97.5 psf. at a fastener density of 1:1.33 ft² (See General Limitation #7)
-127.5 psf. at a fastener density of 1:1 ft² (See General Limitation #7)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type C(9): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA Minimum 2" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	2 or 3 with 7	1:1.33 ft ²

Note: Insulation shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: (SECUROCK only) One or more plies of SBS Smooth, SBS Base, SBS Premium Poly Base, SBS Poly Base, SBS Premium Base fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. with minimum 3 in. wide side laps.
Or
One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Poly Base, SBS Poly Base, SBS Premium Base fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.
Or
(Optional) One or more plies of SBS Glass Torch Base, SBS Poly Torch Base, or SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Membrane: One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.
Or
One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Maximum Design Pressure: -75 psf. (See General Limitation #7)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type C(10): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA		
Minimum ½” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA		
Minimum 2” thick	2 or 3 with 7	1:2.67 ft ²
ISOGARD HD Composite		
Minimum 1½” thick	2 or 3 with 7	1:2.67 ft ²
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum ½” thick	2 or 3 with 7	1:2.67 ft ²

Note: Insulation shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, MB Base, fully adhered to the insulation with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. (except ISO 95+GL and RESISTA) with minimum 3 in. wide side laps.

Or

One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered (except ISO 95+ GL and RESISTA) with minimum 3 in. wide side laps.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Poly Base, SBS Poly Base, SBS Premium Base fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Or

(Optional) One or more plies of SBS Glass Torch Base, SBS Poly Torch Base, or SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Membrane: One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.
Or
One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Maximum Design
Pressure: -45 psf. (See General Limitation #7)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type C(11): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESITA		
Minimum ½” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA		
Minimum 2” thick	2 or 3 with 7	1:1.78 ft ²
ISOGARD HD Composite		
Minimum 1½” thick	2 or 3 with 7	1:1.78 ft ²
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum ½” thick	2 or 3 with 7	1:1.78 ft ²

Note: All Insulation shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, MB Base, fully adhered to the insulation with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. (except ISO 95+GL and RESISTA) with minimum 3 in. wide side laps.

Or

One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered (except ISO 95+ GL and RESISTA) with minimum 3 in. wide side laps.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Poly Base, SBS Poly Base, SBS Premium Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Or

(Optional) One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Membrane: One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Or

One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Maximum Design Pressure: -60 psf. (See General Limitation #7

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type C(12): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum ½" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA, ISOGARD HD Composite Minimum 1½" thick	2 or 3 with 7	1:1.78 ft²

Note: All Insulation shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: One ply of BASEGARD SA, SBS Glass FR Torch, adhered while maintaining minimum 3" side laps.
 (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.
 Or
 (Optional) One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Poly Base, SBS Poly Base, SBS Premium Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.
 Or
 (Optional) One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Membrane: (Optional) One ply of SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Or

(Optional) One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Maximum Design
Pressure: -60 psf. (See General Limitation #7)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type C(13): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA		
Minimum ½” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum ½” thick	2 or 3 with 7	1:1.6 ft ²
RESISTA		
Minimum 1” thick	2 or 3 with 7	1:1.6 ft ²
ISOGARD HD Composite		
Minimum 1½” thick	2 or 3 with 7	1:1.6 ft ²

Note: Top Layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, MB Base, fully adhered to the insulation with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. with minimum 3 in. wide side laps.

Ply Sheet: (Optional) One or more plies of] SBS Smooth, SBS Base, SBS Premium Poly Base, SBS Poly Base, SBS Premium Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Or

(Optional) One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Membrane: One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Or

One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Maximum Design Pressure: -67.5 psf. (See General Limitation #7)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type C(14): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL		
Minimum 1" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum ½" thick	2 or 3 with 7	1:1.33 ft ²

Note: Top Layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, or Ply VI fully adhered to the insulation with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 2 in. wide side laps.
 Or
 One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Ply Sheet: (Optional) One or more plies of] SBS Smooth, SBS Base, SBS Premium Poly Base, SBS Poly Base, SBS Premium Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.
 Or
 (Optional) One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Membrane: One ply of SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Or

One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Maximum Design
Pressure:

-67.5 psf. (See General Limitation #7)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type C(15): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+GL, RESISTA Minimum 1" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	2 or 3 with 7	1:1.78 ft ²

Note: Top Layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, MB Base, fully adhered to the insulation with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Or

One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Ply Sheet: (Optional) One or more plies of] SBS Smooth, SBS Base, SBS Premium Poly Base, SBS Poly Base, SBS Premium Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Or

(Optional) One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Membrane: One ply of SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Or

One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Maximum Design
Pressure:

-75 psf. (See General Limitation #7)\

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type C(16): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA		
Minimum ½” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD Composite		
Minimum 1½” thick	2 or 3 with 7	1:1.78 ft ²

Note: Insulation shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, MB Base, fully adhered to the insulation with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. with minimum 3 in. wide side laps.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Poly Base, SBS Poly Base, SBS Premium Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Or

(Optional) One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Membrane: One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Or

One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Maximum Design Pressure: -75 psf. (See General Limitation #7)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type C(17): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA Minimum ½" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD Composite Minimum 1½" thick	2 or 3 with 7	1:2.67 ft ²

Note: All Insulation shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, MB Base, fully adhered to the insulation with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. with minimum 3 in. wide side laps.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Poly Base, SBS Poly Base, SBS Premium Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.
Or
(Optional) One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Membrane: One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.
Or
One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Maximum Design Pressure: -60 psf. (See General Limitation #7)



Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System TypeC(18): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA Minimum 1" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD Minimum ½" thick	2 or 3 with 7	1:1.33 ft ²
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ¼" thick	2 or 3 with 7	1:1.33 ft ²

Note: All Insulation shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, or Ply VI fully adhered to the insulation with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. (except ISOGARD HD) with minimum 3 in. wide side laps.

Or

(except ISOGARD HD) One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Ply Sheet: (Optional) One or more plies of] SBS Smooth, SBS Base, SBS Premium Poly Base, SBS Poly Base, SBS Premium Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Or

(Optional) One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Membrane: One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Or

One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Maximum Design Pressure: -52.5 psf. (See General Limitation #7)



Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type C(19): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, RESISTA Minimum 1" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
SECUROCK Gypsum-Fiber Roof Board Minimum ¼" thick	2 or 3 with 7	1:1.78 ft ²

Note: All Insulation shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, MB Base, fully adhered to the insulation with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Or

Ply Sheet: One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

(Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Poly Base, SBS Poly Base, SBS Premium Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Or

Membrane: (Optional) One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Or

One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Maximum Design Pressure: -67.5 psf. (See General Limitation #7)



Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type C(20): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA Minimum 1½" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck Prime Minimum ¼" thick	2 or 3 with 7	1:4 ft ²

Note: All Insulation shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: One or more plies of Firestone APP 160 or APP 170 torch applied.
Or
One or more plies of SBS Glass Torch Base, SBS Poly Torch, SBS Glass Torch Base 1.5, torch adhered with minimum 3 in. wide side laps.

Membrane: (Over APP 160 or APP 170 only) One ply of APP 170 Cool, APP 160, APP 170, APP 180, or APP 180 FR torch adhered to the base sheet with minimum 3 in. wide side laps.
Or
(Not for use with APP 160 or APP 170) One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.
Or
(Not for use with APP 160 or APP 170) One ply of SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Maximum Design Pressure: -45 (See General Limitation #9)

Membrane Type: SBS

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type C(21): Membrane fully adhered over mechanically fastened insulation.

Vapor Barrier: (Optional_ 4-6 mil thick polyethylene vapor retarder is placed over deck with min 2 in wide laps sealed with duct tape.

All General and System Limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA Minimum 2.2" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck Prime Minimum ½" thick	2 or 3 with 7	1:1.33 ft²

Note: All Insulation shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: One ply of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, MB Base, or MB Base M fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3 in. wide side laps.

Or

One ply of SBS Glass Torch Base, SBS Poly Torch, SBS Glass Torch Base 1.5, torch adhered with minimum 3 in. wide side laps.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Poly Base, SBS Poly Base, SBS Premium Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Or

(Optional) One or more plies of SBS Glass Torch Base, SBS Poly Torch Base, or SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Membrane: One ply of SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3 in. wide side laps.

Or

One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Maximum Design Pressure: -97.5 psf. (See General Limitation #7)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck: 2500 psi structural concrete or concrete plank
System Type C(22): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA Minimum 1½” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK Gypsum-Fiber Roof Board Minimum ½” thick	2 or 3 with 7	1:45 ft²

Note: All Insulation shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, MB Base, fully adhered to the insulation with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.
Or
One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Poly Base, SBS Poly Base, SBS Premium Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.
Or
(Optional) One or more plies of SBS Glass Torch Base, SBS Poly Torch Base, or SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Membrane: One ply of SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Or

One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Maximum Design Pressure: -90 psf. (See General Limitation #7)

Membrane Type: APP

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type D(1): All layers of insulation and base sheet simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base or Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL or RESISTA Minimum 1.4" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Approved High Density Wood Fiberboard Minimum ½" thick	N/A	N/A
Approved Perlite Minimum ¾" thick	N/A	N/A

Note: Top layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: One ply of Firestone MB Base, MB Base M with a 4" side lap mechanically fastened through the insulation to the deck as described below:

Fastening: Approved Firestone screws with metal plates or Firestone Concrete Drives at the side lap 18" o.c. and two rows staggered in the center of the sheet 36" o.c.

Ply Sheet: (Optional) One or more plies of Firestone MB Base, Ply IV, Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet or other listed base sheet applied in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.; or one ply Firestone APP 160-P torch applied.

Membrane: One ply of Firestone APP 180, APP 180-P, APP 180 UltraWhite, APP 180 FR, APP 180 FR UltraWhite, applied by torch parallel to the base ply, with the overlaps staggered 12".

Surfacing: (Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag at 400 lbs. and 300 lbs., respectively, set in a flood coat of type III or IV asphalt at 60 lbs./sq.
2. Karnak No. 97, No. 97 AF or No. 169, or APOC #212 at an application rate of 1½ gal./sq.

Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type D(2): All layers of insulation and base sheet simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base or Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL or RESISTA Minimum 1.4" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
Approved High Density Wood Fiberboard Minimum ½" thick	N/A	N/A
Approved Perlite Minimum ¾" thick	N/A	N/A

Note: Top layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: One ply of Firestone MB Base, Firestone SBS Base with a 4" side lap mechanically fastened to the deck through the insulation as described below:

Fastening: Approved Firestone screws with metal plates or Firestone Concrete Drives at the side lap 18" o.c. and two rows staggered in the center of the sheet 36" o.c.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Poly Base, SBS Poly Base, SBS Premium Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.
Or
(Optional) One or more plies of SBS Glass Torch Base, SBS Poly Torch Base, or SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Membrane: One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3 in. wide side laps.
Or
One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Surfacing: (Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag at 400 lbs. and 300 lbs., respectively, set in a flood coat of type III or IV asphalt at 60 lbs./sq.
2. Karnak No. 97, No. 97 AF at an application rate of 1½ gal./sq.

Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: APP/SBS

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type D(3): All layers of insulation and base sheet simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL or RESISTA		
Minimum 1.5" thick	N/A	N/A

Note: Top layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: One ply of Firestone MB Base M mechanically fastened to the deck through the insulation with Firestone Heavy Duty Fasteners and Insulation Fastening Plates applied 12" o.c. through the 4" wide base sheet overlaps and 12" o.c. in 2 rows equally spaced and staggered in the field of the base sheet.

OR

One ply of Firestone SBS PolyBase mechanically fastened to the deck through the insulation with Firestone All-Purpose or Heavy Duty Fasteners and 2" Barbed Seam Metal Plates applied 12" o.c. through the 4" wide base sheet overlaps

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Poly Base, SBS Poly Base, SBS Premium Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.

Or

(Optional) One or more plies of SBS Glass Torch Base, SBS Poly Torch Base, or SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

- Membrane: (Only with MB Base M) One ply of Firestone APP Premium FR, APP 170 Cool, APP 180 Cool or APP 180 FR Cool fully adhered to the base sheet with Firestone Multi-Purpose MB Cold Adhesive applied at 1½ - 2 gal./sq.
Or
One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3 in. wide side laps.
Or
One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.
- Surfacing: (Optional) Install one of the following to obtain required fire classification. Any coating, listed below, used as a surfacing, must be listed within a current NOA.
1. Gravel or slag at 400 lbs./sq. or 300 lbs./sq, respectively, in a flood coat of approved asphalt at 60 lbs./sq.
 2. Karnak 97 Fibrated Aluminum Asphalt Roof Coating or Asbestos Free Aluminum Roof Coating at 1½ gal./sq.
- Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: APP

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type D(4): All layers of insulation and base sheet simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL or RESISTA Minimum 1.5" thick	N/A	N/A

Note: Top layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: One ply of Firestone MB Base or MB Base M with a 4" side lap mechanically fastened through the insulation to the deck with Firestone Heavy-Duty fasteners or Firestone Concrete Drives or other Approved concrete deck fasteners at a spacing of 12" o.c. in the 4" side lap and two rows staggered in the center of the sheet, 12" o.c.

Ply Sheet: (Optional) One or more plies of Firestone MB Base, Ply IV , Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet or other listed base sheet applied in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.; or one ply Firestone APP 160-P torch applied.

Membrane: One ply of APP 180, APP 180-P, APP 180 UltraWhite, APP 180 FR, APP 180 FR UltraWhite, applied by torch parallel to the base ply, with the overlaps staggered 12".

Surfacing: (Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag at 400 lbs. and 300 lbs., respectively, set in a flood coat of type III or IV asphalt at 60 lbs./sq.
2. Karnak No. 97, No. 97 AF or No. 169 at an application rate of 1½ gal./sq.

Maximum Design Pressure: -82.5 psf. (See General Limitation #7)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type D(5): All layers of insulation and base sheet simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL or RESISTA Minimum 1.5" thick	N/A	N/A

Note: Top layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: One ply of Firestone MB Base or MB Base M with a 4" side lap mechanically fastened through the insulation to the deck with Firestone Heavy-Duty fasteners or Firestone Concrete Drives or other Approved concrete deck fasteners at a spacing of 12" o.c. in the 4" side lap and two rows staggered in the center of the sheet, 12" o.c.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Poly Base, SBS Poly Base, SBS Premium Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.
 Or
 (Optional) One or more plies of SBS Glass Torch Base, SBS Poly Torch Base, or SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Membrane: One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3 in. wide side laps.
 Or
 One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Surfacing: (Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag at 400 lbs. and 300 lbs., respectively, set in a flood coat of type III or IV asphalt at 60 lbs./sq.
2. Karnak No. 97, No. 97 AF at an application rate of 1½ gal./sq.

Maximum Design Pressure: -82.5 psf. (See General Limitation #7)



Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type D(6): All layers of insulation and base sheet simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL or RESISTA Minimum 1.5" thick	N/A	N/A

Note: Top layer shall have preliminary attachment, prior to the installation of the base sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: One ply of Firestone MB Base M with a 4" side lap mechanically fastened through the insulation to the deck with Firestone Heavy-Duty fasteners and plated or Firestone Concrete Drives at a spacing of 12" o.c. within the 4" side lap and two staggered rows, equally spaced in the center of the sheet, 12" o.c.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Poly Base, SBS Poly Base, SBS Premium Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.
 Or
 (Optional) One or more plies of SBS Glass Torch Base, SBS Poly Torch Base, or SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Membrane: One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3 in. wide side laps.
 Or
 One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Surfacing: (Optional) Install one of the following to obtain required fire classification.
 1. Roof gravel at 400 lbs./sq. in a flood coat of approved asphalt
 2. Roof gravel in Firestone Multi-Purpose MB Cold Adhesive at 2.5 gal./sq

Maximum Design Pressure: -82.5 psf. (See General Limitation #7)



Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type D(7): All layers of insulation and base sheet simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL or RESISTA Minimum 1.5" thick	N/A	N/A

Note: Top layer shall have preliminary attachment, prior to the installation of the base sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: One ply of Firestone SBS Poly Torch Base Sheet with a 4" side lap mechanically fastened through the insulation to the deck with Firestone Heavy-Duty fasteners or Firestone Concrete Drives and Insulation Fastening Plates at a spacing of 12" o.c. within the 4" side lap and two staggered rows, equally spaced in the center of the sheet, 12" o.c.

Ply Sheet: One or more plies of Firestone SBS Poly Torch Base Sheet torch applied to the base sheet with the 3" side laps are heat fused with a torch.

Membrane: One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3 in. wide side laps.
Or
One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Surfacing: (Optional) Install one of the following to obtain required fire classification.
1. Roof gravel at 400 lbs./sq. in a flood coat of approved asphalt.
2. Roof gravel in Firestone Multi-Purpose MB Cold Adhesive at 2.5 gal./sq

Maximum Design Pressure: -82.5 psf. (See General Limitation #7)

Membrane Type: SBS

Deck Type 3I : Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type D(8): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA Minimum ½" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA, ISOGARD HD Composite Minimum 1½" thick	N/A	N/A
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	N/A	N/A

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of SBS Poly Base or SBS Premium Poly Base, SBS Smooth, mechanically fastened through the insulation with Heavy-Duty fasteners and Coiled Metal Batten Strip spaced 18" o.c. at the minimum 3" side laps.

Ply Sheet: One or more plies of SBS Smooth, SBS Base, SBS Premium Poly Base, SBS Poly Base, SBS Premium Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.
Or
One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Membrane: One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3 in. wide side laps.
Or
One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Maximum Design Pressure: -52.5 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 3I : Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type D(9): All layers of insulation simultaneously mechanically fastened with base sheet.

All General and System Limitations apply.

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA Minimum 1" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA, ISOGARD HD Composite Minimum 1" thick	N/A	N/A

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of SBS Base, SBS Glass Torch Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, SBS Smooth or SBS Poly Torch Base, mechanically fastened through the insulation with Concrete Drive or Heavy-Duty fasteners and Insulation Fastening Plates spaced 12" o.c. at the minimum 3.4" side laps and 12" o.c. in two staggered rows in the field of the roll.

Ply Sheet: One or more plies of SBS Smooth, SBS Base, SBS Premium Poly Base, SBS Poly Base, SBS Premium Base, Ply IV, Ply VI, MB Base, fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3 in. wide side laps.
Or
One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, SBS Glass Torch Base 1.5 torch adhered with minimum 3 in. wide side laps.

Membrane: One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3 in. wide side laps.
Or
One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Maximum Design Pressure: -60 psf. (See General Limitation #7.)

Membrane Type: APP
Deck Type 3: Concrete Decks, Non-insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type E(1): Base sheet mechanically attached.

All General and System Limitations apply.

Base Sheet: One ply of Firestone MB Base or MB Base M with a 4" side lap mechanically fastened to the deck as described below:

Fastening: Fasten base sheet with OMG #14 Roofgrip screws and metal or plastic plates at a 4" side lap 18" o.c. and two rows staggered in the center of the sheet 36" o.c.

Ply Sheet: (Optional) One or more plies of Firestone MB Base, Ply IV , Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet or other listed base sheet applied in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.; or one ply Firestone APP 160-P torch applied.

Membrane: One ply of APP 180, APP 180-P, APP 180 UltraWhite, APP 180 FR, APP 180 FR UltraWhite, applied by torch parallel to the base ply, with the overlaps staggered 12".

Surfacing: (Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag at 400 lbs. and 300 lbs., respectively, in a flood coat of approved asphalt at an application rate of 60 lbs./sq.
2. Karnak No. 97, No. 97 AF or No. 169, or APOC #212 at an application rate of 1½ gal./sq.

Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: APP
Deck Type 3: Concrete Decks, Non-insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type E(2): Base sheet mechanically attached.

All General and System Limitations apply.

Base Sheet: One ply of Firestone MB Base or MB Base M with a 4" side lap mechanically fastened through the insulation to the deck with Firestone Heavy-Duty fasteners or Firestone Concrete Drives or other Approved concrete deck fasteners at a spacing of 12" o.c. in the 4" side lap and two rows staggered in the center of the sheet, 12" o.c.

Ply Sheet: (Optional) One or more plies of Firestone MB Base, Ply IV , Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet or other listed base sheet applied in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.; or one ply Firestone APP 160-P torch applied.

Membrane: One ply of APP 180, APP 180-P, APP 180 UltraWhite, APP 180 FR, APP 180 FR UltraWhite, applied by torch parallel to the base ply, with the overlaps staggered 12".

Surfacing: (Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag at 400 lbs. and 300 lbs., respectively, in a flood coat of approved asphalt at an application rate of 60 lbs./sq.
2. Karnak No. 97, No. 97 AF or No. 169, or APOC #212 at an application rate of 1½ gal./sq.

Maximum Design Pressure: -82.5 psf. (See General Limitation #7)

Membrane Type: SBS

Deck Type 3: Concrete Decks, Non-insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type E(3): All layers of insulation and base sheet simultaneously attached.

All General and System Limitations apply.

Base Sheet: One ply of Firestone MB Base or MB Base M with a 4" side lap mechanically fastened through the insulation to the deck with Firestone Heavy-Duty fasteners or Firestone Concrete Drives or other Approved concrete deck fasteners at a spacing of 12" o.c. in the 4" side lap and two rows staggered in the center of the sheet, 12" o.c.

Ply Sheet: (Optional) One or more plies of Firestone MB Base, SBS Base, Ply IV, Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet or other listed base or ply sheet mopped in approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3 in. wide side laps.

Or

One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Surfacing: (Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag at 400 lbs. and 300 lbs., respectively, set in a flood coat of type III or IV asphalt at 60 lbs./sq.
2. Karnak No. 97, No. 97 AF at an application rate of 1½ gal./sq.

Maximum Design Pressure: -82.5 psf. (See General Limitation #7)

Membrane Type: APP

Deck Type 3: Concrete Decks, Non-insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type F(1): Base sheet adhered with approved adhesive.

All General and System Limitations apply.

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet.

Base Sheet: One or more plies of Firestone APP 80 Glass Base or fully adhered to the deck with Firestone Multi-Purpose MB Cold Adhesive applied at 1½ - 2 gal./sq.

Membrane: One ply of Firestone APP Premium FR, APP 170 Cool, APP 180 Cool, or APP 180 FR Cool fully adhered to the base sheet with Firestone Multi-Purpose MB Cold Adhesive applied at 1½ - 2 gal./sq.

Surfacing: (Optional) Install one of the following to obtain required fire classification. Any coating, listed below, used as a surfacing, must be listed within a current NOA.

1. Gravel or slag at 400 lbs./sq. or 300 lbs./sq, respectively, in a flood coat of approved asphalt at 60 lbs./sq.
2. Karnak 97 Fibrated Aluminum Asphalt Roof Coating or Asbestos Free Aluminum Roof Coating at 1½ gal./sq.

Maximum Design Pressure: -127.5 psf. (See General Limitation #9.)

Membrane Type: APP/SBS

Deck Type 3: Concrete Decks, Non-insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type F(2): Base sheet adhered with approved adhesive.

All General and System Limitations apply.

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet.

Base Sheet: One or more plies of Firestone SBS Base, SBS Poly Base or SBS Premium Base sheet fully adhered to the deck with Firestone Multi-Purpose MB Cold Adhesive applied at 1½ - 2 gal./sq.

Membrane: One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite fully adhered with Firestone Multi-Purpose MB Cold Adhesive applied at a rate of 1.5-2.0 gal./sq. or LiquiGard Membrane Adhesive applied at a rate of 1.5-2.0 gal./sq., or hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3 in. wide side laps.
Or
One ply of SBS Glass FR Torch, SBS Glass FR Torch Ultrawhite, SBS Torch, SBS Torch Ultrawhite, SBS Premium Torch, SBS Premium Torch Ultrawhite, SBS FR Torch, SBS FR Torch Ultrawhite, SBS Premium FR Torch, SBS Premium FR Torch Ultrawhite torch adhered with minimum 3 in. wide side laps.

Surfacing: (Optional) Install one of the following to obtain required fire classification. Any coating, listed below, used as a surfacing, must be listed within a current NOA.

1. Gravel or slag at 400 lbs./sq. or 300 lbs./sq, respectively, in a flood coat of approved asphalt at 60 lbs./sq.
2. Karnak 97 Fibrated Aluminum Asphalt Roof Coating or Asbestos Free Aluminum Roof Coating at 1½ gal./sq.

Maximum Design Pressure: -180 psf. (See General Limitation #9)

Membrane Type: SBS
Deck Type 3: Concrete Decks, Non-insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type F(3): Base sheet adhered with approved asphalt.

All General and System Limitations apply.

Base Sheet: One or more plies of Firestone Ply IV (4) M, Ply VI (6) M are fully adhered with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2 gal./square.

Membrane: Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite is fully adhered with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2 gal./square. The minimum 3 in. wide side laps are sealed with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2 gal./square.

OR

(Only with Type IV or Type VI felts) One ply of Firestone SBS Torch, SBS Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS Premium FR Torch or SBS Premium FR Torch UltraWhite cap sheet torch adhered to the ply sheet with the 3” side laps heat fused with a torch.

OR

(Only with Type IV or Type VI felts) One ply of Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite fully adhered to the base sheet with hot asphalt adhesive applied within the EVT range and at a rate of 20-40 lbs./sq

OR

(Only with Type IV or Type VI felts) One ply of Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR or SBS Premium FR UltraWhite cap sheet fully adhered to the base sheet with Firestone Multi-Purpose MB Cold Adhesive applied at 1½ - 2 gal./sq

Surfacing: (Optional) Install one of the following to obtain required fire classification.
1. Roof Gravel at 400 lbs./sq. in a flood coat of approved asphalt

Maximum Design Pressure: -495 psf. (See General Limitation #9.)

Membrane Type: SBS
Deck Type 3: Concrete Decks, Non-insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type F(4): Base sheet adhered with approved asphalt.

All General and System Limitations apply.

Base Sheet: One ply of Firestone MB Base M, SBS Base, SBS PolyBase or SBS Premium Base are fully adhered with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2 gal./square.

Ply Sheet: (Optional) One or more plies of Firestone Ply IV (4) M, Ply VI (6) M or one ply of Firestone MB Base M, SBS Base, SBS PolyBase or SBS Premium Base are fully adhered with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2 gal./square.

Membrane: Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite is fully adhered with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2 gal./square. The minimum 3 in. wide side laps are sealed with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2 gal./square.

OR

(Only with Type IV or Type VI felts) One ply of Firestone SBS Torch, SBS Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS Premium FR Torch or SBS Premium FR Torch UltraWhite cap sheet torch adhered to the ply sheet with the 3” side laps heat fused with a torch.

OR

(Only with Type IV or Type VI felts) One ply of Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite fully adhered to the base sheet with hot asphalt adhesive applied within the EVT range and at a rate of 20-40 lbs./sq

OR

(Only with Type IV or Type VI felts) One ply of Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR or SBS Premium FR UltraWhite cap sheet fully adhered to the base sheet with Firestone Multi-Purpose MB Cold Adhesive applied at 1½ - 2 gal./sq

Surfacing: (Optional) Install one of the following to obtain required fire classification.

1. Roof Gravel at 400 lbs./sq. in a flood coat of approved asphalt

Maximum Design Pressure: -495 psf. (See General Limitation #9.)

Membrane Type: APP
Deck Type 3: Concrete Decks, Non-insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type F(5): Base sheet adhered with approved asphalt.

All General and System Limitations apply.

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet.

Base Sheet: One ply of Firestone MB Base or Firestone Ply IV , Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet adhered to the properly primed deck in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: (Optional) One or more plies of Firestone MB Base, Ply IV , Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet or other listed base sheet applied in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.; or one ply Firestone APP 160-P torch applied.

Membrane: One ply of APP 180, APP 180-P, APP 180 UltraWhite, APP 180 FR, APP 180 FR UltraWhite, applied by torch parallel to the base ply, with the overlaps staggered 12".

Surfacing: (Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag at 400 lbs. and 300 lbs., respectively, in a flood coat of approved asphalt at an application rate of 60 lbs./sq.
2. Karnak No. 97, No. 97 AF or No. 169, or APOC #212 at an application rate of 1½ gal./sq.

Maximum Design Pressure: -522.5 psf. (See General Limitation #9.)

Membrane Type: SBS
Deck Type 3: Concrete Decks, Non-insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type F(6): Base sheet adhered with approved asphalt.

All General and System Limitations apply.

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet.

Base Sheet: One ply of Firestone MB Base, SBS Base or Firestone Ply IV , Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet adhered to the properly primed concrete deck with a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: (Optional) One or more plies of Firestone MB Base, Ply IV , Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet, SBS Smooth, SBS Base, or other Approved base or ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: One ply of Firestone SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

OR

(Not with MB Base) One ply of Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite fully adhered with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2 gal./square. The minimum 3 in. wide side laps are sealed with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2 gal./square

OR

One ply of Firestone SBS Torch, SBS Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS Premium FR Torch or SBS Premium FR Torch UltraWhite, torch adhered

OR

(Not with SBS Base, SBS Smooth) One ply of Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR or SBS Premium FR UltraWhite cap sheet fully adhered to the base sheet with Firestone Multi-Purpose MB Cold Adhesive applied at 1½ - 2 gal./sq.

Surfacing: (Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag at 400 lbs. and 300 lbs., respectively, set in a flood coat of type III or IV asphalt at 60 lbs./sq.
2. Karnak No. 97, No. 97 AF at an application rate of 1½ gal./sq.

Maximum Design Pressure: -547.5 psf. (See General Limitation #9.)

Membrane Type: APP
Deck Type 3: Concrete Decks, Non-insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type F(7): Base sheet adhered.

All General and System Limitations apply.

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet.

Base Sheet: One ply of APP 160-P applied by torch parallel to the base ply, with the overlaps staggered 12".

Ply Sheet: (Optional) One or more plies of Firestone MB Base, Ply IV , Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet or other listed base sheet applied in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.; or one ply Firestone APP 160-P torch applied.

Membrane: One ply of APP 180, APP 180-P, APP 180 UltraWhite, APP 180 FR, APP 180 FR UltraWhite, applied by torch parallel to the base ply, with the overlaps staggered 12".

Surfacing: (Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag at 400 lbs. and 300 lbs., respectively, set in a flood coat of type III or IV asphalt at 60 lbs./sq.
2. Karnak No. 97, No. 97 AF at an application rate of 1½ gal./sq.

Maximum Design Pressure: -312.5 psf. (See General Limitation #9.)

CONCRETE DECK SYSTEM LIMITATIONS:

1. If mechanical attachment to the structural deck through the lightweight insulating concrete is proposed, a field withdrawal resistance testing shall be performed to determine equivalent or enhanced fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 117, calculations shall be signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance, refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each sidelap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq. **Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.**
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform with Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 61G20-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE



NOA No.: 13-0522.04
Expiration Date: 03/08/16
Approval Date: 08/21/14
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